

The CONSTRUCTOR

OFFICIAL PUBLICATION OF THE ASSOCIATED GENERAL CONTRACTORS OF AMERICA



Volume XXXV

OCTOBER 1953

Number 10

BUILDINGS

HIGHWAYS

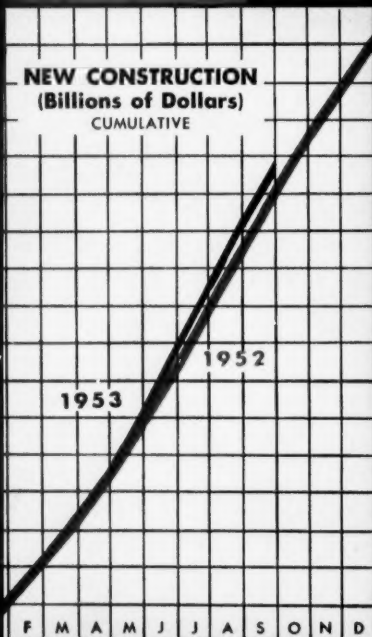
AIRPORTS

RAILROADS

PUBLIC WORKS



NEW CONSTRUCTION
(Billions of Dollars)
CUMULATIVE



A.G.C. Maps Course at Board Meeting—24

Competition Intensifying, Poll Shows—21

Road Maintenance by Contract in Ohio—48

no other grader offers you this

UNBEATABLE COMBINATION

all-wheel drive

wakes up the front wheels

The front end of the ordinary motor grader is lazy, dead weight, contributing nothing to traction.



On the Austin-Western Power Grader, every pound rides on a driving wheel, contributing 100 per cent to traction.



all-wheel steer

frees the rear wheels

Non-steerable rear wheels slow-down all operations, make them more difficult.

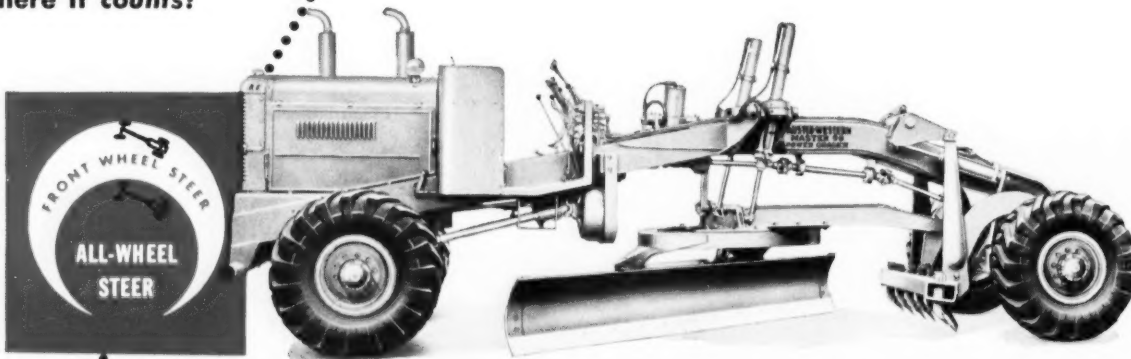


Steerable rear wheels speed up every job, make it easy to do things impossible for other graders.



Twice the maneuverability

30% more POWER at the blade—more power where it counts!



No wonder . . . Austin-Western "88-H," "99-H" and Master "99" Power Graders, with their finger-tip hydraulic control and unequalled stamina, plus exclusive All-Wheel Drive and All-Wheel Steer, outpull, outmaneuver and just naturally outperform all others.

Austin-Western
Power Graders • Motor Sweepers
Road Rollers • Hydraulic Cranes



Construction Equipment Division

Manufactured by
AUSTIN-WESTERN COMPANY
Subsidiary of Baldwin-Lima-Hamilton Corporation
AURORA, ILLINOIS, U.S.A.

If you **STALL**—profits **STOP**!



When a tire fails to *grip*, you lose time and money. When a tire “dies” on the job, men and equipment stand idle, profits disappear.

That’s why the *only* tires you can afford are the best *workers*—the ones that can take on tire-killing jobs, day in, day out—and keep going!

Only worlds of experience can build such tires — *and Goodyear has it* — for Goodyear has built more tires for more uses than anyone else on earth!

This enormous, unequalled experience gives Goodyear a *practical* approach to your tire problems that means better pull and longer wear. So why not protect *your* profits with the tires that *proved* they pay their own way, day after day, on the toughest jobs on earth?

Goodyear, Truck Tire Department, Akron 16, Ohio.

**FOR EACH JOB, THERE’S A
COST-CUTTING GOODYEAR TIRE!**

Sure-Grip, All-Weather—T. M.’s The Goodyear Tire & Rubber Company, Akron, Ohio



The
SURE-GRIP
for traction



The **HARD
ROCK LUG** for
tire-killing work



The
ALL-WEATHER
for flotation

GOOD YEAR

MORE TONS ARE HAULED ON GOODYEAR TRUCK TIRES THAN ON ANY OTHER KIND

We think you'll like "THE GREATEST STORY EVER TOLD"—every Sunday—ABC Radio Network—THE GOODYEAR TELEVISION PLAYHOUSE—every other Sunday—NBC TV Network

84 FLOORS^{concreted with 'INCOR'} in 69 WORKING DAYS

**Tight Schedules and
Dependable 'Incor'
Performance
Save Time, Cut Costs
to the Bone**



MARCH 22, 1953



JUNE 30, 1953

ST. NICHOLAS HOUSES—SECTION 3

Owner: NEW YORK CITY HOUSING AUTHORITY

General Contractors:

C. E. YOUNGDAHL & COMPANY, INC., Long Island City
JAMES McHUGH CONSTRUCTION CO., Chicago, Ill.

Architects: YORK & SAWYER, New York

Structural Engineers:

SEVERUD, ELSTAD & KRUEGER, New York

Ready-Mix 'Incor' Concrete:

JAMES A. NORTON, INC., New York

● Emphasizing utmost value for the public's building dollar, the New York City Housing Authority has encouraged many advances in building techniques, outstanding among which is widespread use of reinforced-concrete-frame construction.

Recent example is Section III, St. Nicholas Houses—six 14-story-and-roof units . . . first pour, March 22, 1953, topped out June 30 . . . 84 floors concreted by C. E. YOUNGDAHL & COMPANY, INC., in 69 working days.

Maximum job speed and economy, due to tight schedules, based on dependable 'Incor'* 24-hour stripping strengths . . . engineered forms, built to closest tolerances for streamlined erection efficiency . . . expert utilization of skilled work force.

Further proof that sound planning and open-minded co-operation among Designer, Builder and Owner make it possible to obtain the fire-safety and structural soundness of concrete, at costs and erection speed which equal or beat any other type of construction.

*Reg. U. S. Pat. Off.



LONE STAR CEMENTS COVER
THE ENTIRE CONSTRUCTION FIELD

LONE STAR CEMENT CORPORATION

Offices: ABILENE, TEX. • ALBANY, N. Y. • BETHLEHEM, PA. • BIRMINGHAM
BOSTON • CHICAGO • DALLAS • HOUSTON • INDIANAPOLIS
KANSAS CITY, MO. • NEW ORLEANS • NEW YORK • NORFOLK
PHILADELPHIA • RICHMOND • ST. LOUIS • WASHINGTON, D. C.
LONE STAR CEMENT, WITH ITS SUBSIDIARIES, IS ONE OF THE WORLD'S LARGEST
CEMENT PRODUCERS: 18 MODERN MILLS, 129,000,000 SACKS ANNUAL CAPACITY

The CONSTRUCTOR

CONTENTS

BUILDINGS • HIGHWAYS • AIRPORTS



RAILROADS • PUBLIC WORKS

GENERAL

- Competition Is Intensifying, Survey Shows..... 21
 Pennsylvania Builders Must Pay New Sales Tax on
 Materials 23

NATIONAL ASSOCIATION

- A.G.C. Leaders Plot Association Course at Mid-Year
 Board Meeting in Chicago..... 24
 MacLeod and Koss Nominated for Top A.G.C. Posts... 26

LABOR RELATIONS

- Eisenhower Ready to Report Recommendations on
 Taft-Hartley Act..... 29
 Recent Labor Cases Affecting Construction..... 30

INDUSTRY RELATIONS

- A.G.C. Boards Reveal Fallacies in Proposed
 Subcontractor Bills..... 30

APPRENTICE TRAINING

- Apprenticeship Group Backs Training Film..... 34

BUILDING

- A.G.C. Building Contractors Review Program..... 39
 A.G.C. Joint Cooperative Committees Meet..... 40

HEAVY • RAILROAD

- Contractors Study Specifications Reforms..... 42

HIGHWAYS • AIRPORTS

- Road Contractors Review Current Problems..... 45

CONTRACT METHOD

- Highway Maintenance by Contract Works in Ohio... 48

MANAGEMENT

- Widows Complete Abandoned Dam as Last Job of
 60-Year-Old Family Construction Firm..... 50

EQUIPMENT

- A.E.D.-A.G.C. Committee Cites Need for Local Activity
 Industry Conditions Reviewed by C.I.M.A.-A.G.C.
 Group During A.G.C. Board Meeting..... 52

ACCIDENT PREVENTION

- A.G.C. Safety Drive Being Stepped Up..... 57
 Deaths on Construction Jobs Down Slightly..... 58

A. G. C. REPORT

- A.G.C. Mid-Year Report..... *H. E. Foreman* 62

CHAPTERS • BRANCHES

- Secretaries View Current Industry Picture..... 78
 A.G.C. Branch and Chapter Meetings..... 79

ALSO IN THIS ISSUE

- News of the Month..... 5
 Constructographs..... 7, 9, 11
 Consumers' Price Index..... 13
 Sidlights for Contractors..... *John C. Hayes* 15
 Editorials..... 17
 A.G.C. Forms and Reports..... 81
 New Equipment and Materials..... 82
 Advertisers' Products..... 90
 Index of Advertisers..... 95

EXECUTIVE DEPARTMENT

H. E. FOREMAN Editor
 JOHN C. HAYES Legal Counsel
 JOHN B. SWEM Assistant Treasurer

BOARD OF DIRECTORS

GEORGE B. WALBRIDGE President
 WILLIAM MUIRHEAD Secretary-Treasurer
 H. E. FOREMAN Vice-President
 G. W. MAXON Director
 B. L. KNOWLES Director

EDITORIAL DEPARTMENT

WILLIAM E. WOODRUFF, Managing Editor
 WILLIAM G. DOOLY, JR., News Editor



BUSINESS DEPARTMENT

M. S. BECK Business Manager
 GENEVIEVE MORRIS Assistant

COVER

One of the world's largest subaqueous tubes, the longest in Texas, was opened to traffic last month. The \$10-million tunnel stretches 3,009 ft. from Baytown to La Porte. The tube is 35 ft. in diameter with 22-ft. wide roadway.

The Official Publication of The Associated General Contractors of America, Inc.

Published monthly. Editorial and Executive Office, Munsey Building, Washington 4, D. C. Subscription price \$5.00 per year. 40¢ per copy (July \$2.00). Re-entered as second class matter June 10, 1949, at the Postoffice at Washington, D. C., under the Act of March 4, 1879. Copyright 1953 by The Constructor, Inc.



Crane working on Detroit's new Underground Reservoir.

JOB-ENGINEERED FINANCE PLANS

A giant crane, owned by the J. R. Azola Company, helps speed construction of Detroit's new Northwest Booster Station and Underground Reservoir.

Awarded a \$700,000 contract for their part of the job, the J. R. Azola Company had the equipment and the resources to handle the job. C.I.T. Corporation has contributed recently in two ways to the J. R. Azola Com-

pany's ability to perform efficiently on job contracts: 1) The arranging of equipment financing and 2) a medium-term loan to supply additional operating funds.

Whatever your financing requirements, C.I.T. Corporation has a job-engineered finance plan to fit them. Write or call one of the offices listed below. A field representative will discuss them with you personally.

C.I.T. CORPORATION

INDUSTRIAL AND EQUIPMENT FINANCING

NEW YORK • CHICAGO • CLEVELAND • ATLANTA • MEMPHIS
PHILADELPHIA • SAN FRANCISCO • PORTLAND • LOS ANGELES • HOUSTON



THE CONSTRUCTOR, OCTOBER 1953

A.G.C. Midyear Board Meeting in Chicago was attended by more than 300 representatives of the association from throughout the nation and Alaska who thoroughly analyzed industry conditions and made recommendations for future A.G.C. actions. At three board sessions, separate roundtable discussions for building, highway and heavy construction contractors, and at meetings of numerous committees and the Secretaries' and Managers' Council, the officials reviewed and approved the broad program. (Meeting report begins on page 24; Managing Director's report on page 62.)

Officers for 1953 nominated by A.G.C. Governing and Advisory Boards are John MacLeod, Maceo Corp., Paramount, Calif., for president and George C. Koss, Koss Construction Co., Des Moines, for vice president. (Page 26)

Construction in 1953 will amount to the largest volume of work in history, and the competition between general contractors for new work, which was already extremely keen, has been intensifying during the year, an A.G.C. survey of market conditions revealed. Past President Walter L. Couse, Detroit, told the Governing and Advisory Boards in Chicago last month. (Page 21)

New construction volume for the first 9 months of 1953 totalled an estimated \$25.9 billion the Commerce Department announced this month. This compares with \$24.1 billion put in place during the same period last year. September, which had \$3.3 billion in new construction was the fourth consecutive month that this figure totalled over \$3 billion. There will be an estimated \$34.6 billion of new construction this year, an all-time high for both dollar and physical volume, the Commerce Department added.

Capital outlays by American business in the last six months of 1953 are estimated to reach \$14.4 billion, making the year's total \$27.8 billion, about 5% above last year, the Commerce Department and the Securities and Exchange Commission announced last month.

High level of business was predicted for this year and next by Commerce Secretary Weeks early this month. He said that some weaknesses will appear

in spots, but that the "foundations are secure," because many lines are ahead of last year.

Spanish bases for the U. S. Air Force and Navy were assured by the mutual defense pact signed last month between this country and Spain. Terms of the agreement call for \$226 million in aid to Spain, for which this country will have use of certain Spanish air and naval bases. Also, the U. S., jointly with Spain, will start construction to develop these bases for mutual use. A further agreement provides for development of more bases if future conditions require it.

Cost of living set a new high of 115 in August for the third month in a row, the Bureau of Labor Statistics reported last month. This is the sixth straight increase of the index which now stands 0.6% higher than it did a year ago and 13% above June 1950, prior to the Korean war. (Page 13)

Taft-Hartley amendments of President Eisenhower are expected to be sent to Congress in January, Vice President Nixon speaking for the President, told the American Federation of Labor convention in St. Louis last month. Without revealing details, the President's message said that an informal committee will report recommendations for changes in the law later this year. (Page 29)

Two A.F.L. leaders this month urged President Eisenhower to support Taft-Hartley law amendments of interest to the building trades unions. Richard J. Gray, president of the federation's building and construction trades department, and Maurice A. Hutcheson, president of the carpenters' union asked for the amendments which would permit pre-job certification of construction unions, modify the boycott on secondary strikes, repeal provisions remitting state laws to supersede federal labor statutes, and allow employers unlimited authority to reassign workers to jobs. (Page 31)

A.F.L. building trades President Gray predicted that the federation will be split apart by "open warfare" unless its unions end their bitter rivalries and work to reduce jurisdictional disputes. Mr. Gray made his views known in the department's *Bulletin*, and laid his

plan before the A.F.L. convention in St. Louis last month.

National Labor Relations Board, currently made up of two Democratic appointees and two Republican appointees, is expected to take on a more conservative policy when the fifth member is appointed by President Eisenhower. In recent Democratic administrations the board has been criticized by many for being pro-labor. (Page 30)

Secretary of Commerce Sinclair Weeks announced the establishment of the Business and Defense Services Administration, a new agency of the Department of Commerce which a) continues the residual defense and mobilization functions of the former National Production Authority, b) consolidates five current departmental offices, c) establishes 25 industry divisions, and d) provides a focal point for effective cooperation between government and business in promoting economic stability and growth.

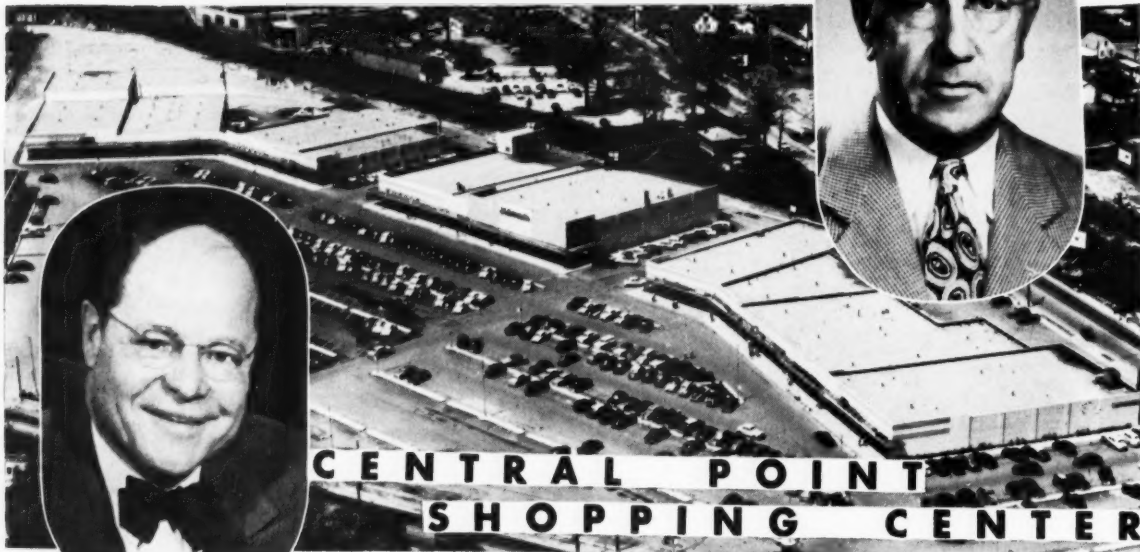
Bureau of Reclamation officials last month met in Denver with A.G.C. officials to discuss mutual problems dealing with reclamation projects. Bureau representatives asked A.G.C. to help minimize the large number of claims of errors in bids on bureau jobs. The A.G.C. sought bureau support against the award of federal contracts at adjusted prices resulting from a plea of error on the part of the low bidder.

Federal construction contracts awards for the first six months of 1953 totalled \$1.5 billion, one-third under the amount for the first half of last year, the Department of Labor announced last month. Schools and building construction at airfields were the only types of work showing an increase over last year. Altogether, 36 states showed declines from last year in the value of federal construction contracts awarded during the first half of 1953.

Highway maintenance by contract works in Ohio, C. W. McCaughy, of the Ohio highway department, says in this month's *CONSTRUCTOR*. He praises the contract method of highway repair as being economical, since most of this summer's bids were below estimated cost. It is up to the contractor to see that the jobs are efficient and meet with state standards, he says. (Page 48)

"Teamwork Does It,"

SAYS ARCHITECT, C. MELVIN FRANK



DON M. CASTO - DON M. CASTO, JR.

DEVELOPERS

COLUMBUS, OHIO

THE ARCHITECT, THE BUILDER AND YOUR LOCAL MACOMBER REPRESENTATIVE MAKE A TEAM

Architect C. Melvin Frank, A.I.A. of Columbus, Ohio has specified and used Macomber Steel Building Products for many of his projects.

He has found a winning team in working with the Don M. Casto organization and the Howard S. Sterner Co., the Columbus Macomber representative who has expedited his steel and assisted all along the line as Consulting Structural Engineers.

Working together, this team has completed one large shopping center after another and expanded those completed in recent years to accommodate the patronage centered in these attractive units.

To any Architect and Builder anywhere, there is a message that pays dividends in the teamwork you can expect from your Macomber Representative. Call him for valuable assistance on your next steel building project.

ORIGINATORS OF THE

OPEN WEB STEEL JOIST

STANDARDIZED STEEL
V BAR JOISTS • LONGSPANS

BUILDING PRODUCTS
STEEL TRUSSES • STEEL DECK

MACOMBER INCORPORATED

CANTON 1, OHIO

• ENGINEERING • FABRICATING AND ERECTING •

A Series of Graphs Outlining the Construction Trend

Compiled by The Associated General Contractors of America

TREND OF CONSTRUCTION COSTS

The average of construction costs in the principal construction centers of the United States for September stands at Index Number 417 according to the A.G.C. Index. The cost figure for September 1952 was 394. The 1913 average equals 100.

WAGE AND MATERIAL PRICE TRENDS

The average of wages in the principal construction centers of the United States stands at 584 for September. One year ago the average stood at 543. The average prices paid by contractors for basic construction materials for September stand at In-

dex Number 306. The average a year ago stood at 292. The 1913 average, again, equals 100.

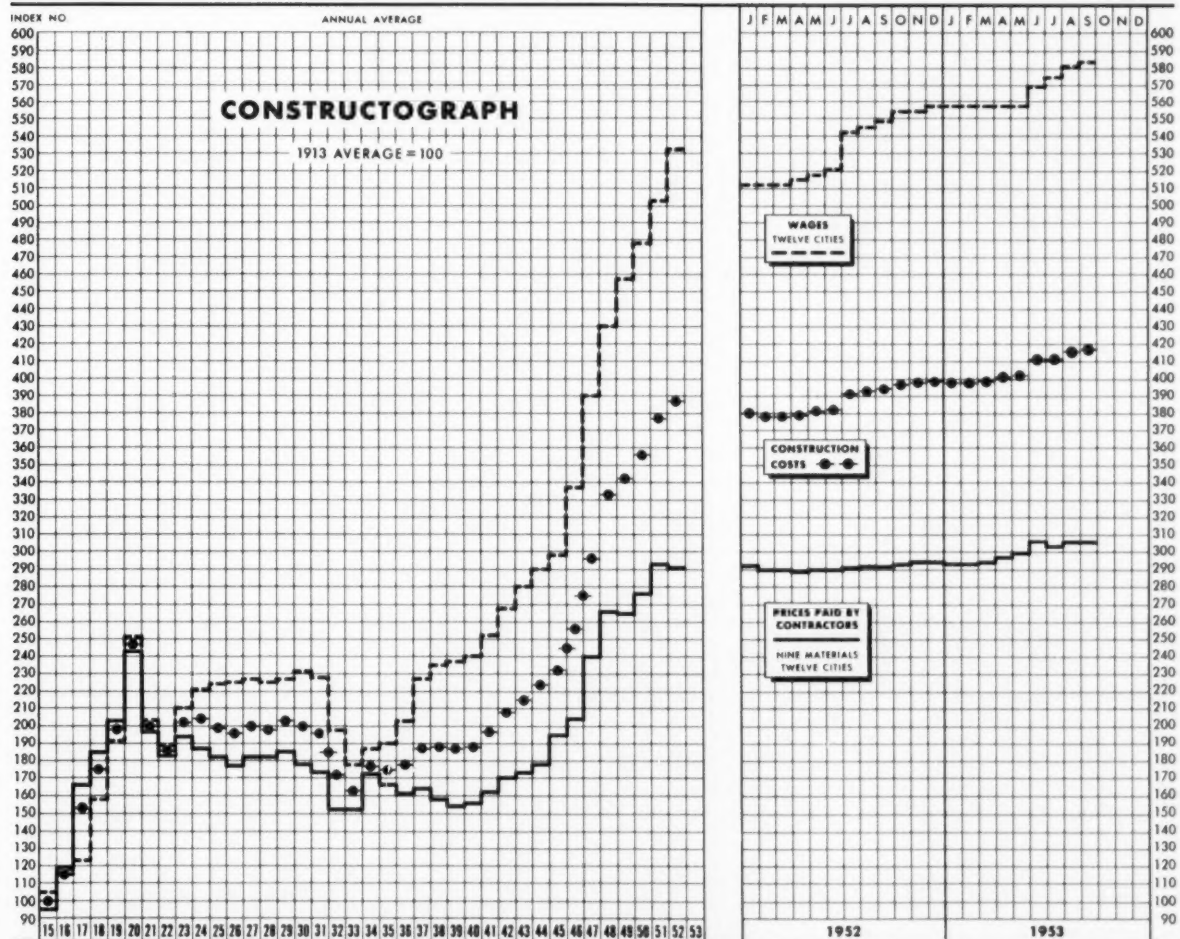
CONTRACT AWARDS IN 37 STATES

The volume of contracts awarded during August (Index Number 258, based on 1936-38) is a decrease of 72 points from July and a decrease of 19 points from August 1952. (F. W. Dodge Corp.)

REVENUE FREIGHT LOADINGS

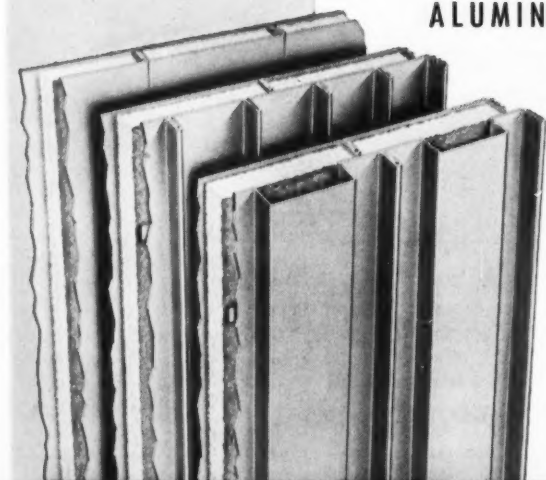
Revenue freight loaded during the first 38 weeks of 1953 totaled 28,248,330 cars. For the same period in 1952, loadings amounted to 27,155,831 cars. This represents an increase of 4%.

● Wage, Material Price and Construction Cost Trends



INSULATED METAL WALLS

for INDUSTRIAL and COMMERCIAL BUILDINGS
ALUMINUM, STAINLESS or GALVANIZED STEEL



FLUSH, RIBBED, or FLUTED
Over-all "U" Factor of Various Types is Equivalent
to or Better than Conventional 16" Masonry Wall

Insulated Metal Walls have not only gained universal acceptance from a practical and economical standpoint, but are today recognized by architects as a component which, when combined with masonry or other materials, opens new potentialities in exterior design effects. The building below, which is a combination of Mahon Aluminum Insulated Wall Panels and brick, is an outstanding example of the architectural effects obtainable. Insulated Metal Walls offer definite advantages in lower cost of both materials and labor, reduction in construction time through rapid erection—plus the fact that these walls can be erected in sub-zero weather. Mahon Insulated Metal Walls are available in the three exterior patterns shown at left. The Mahon "Field Constructed" Fluted or Ribbed Wall can be erected up to sixty feet in height without a horizontal joint—a feature of Mahon walls which is particularly desirable in powerhouses or other buildings where high expanses of unbroken wall surface are common. See Sweet's Files for information, or write for Catalog No. B-54-B.

THE R. C. MAHON COMPANY

Detroit 34, Mich. • Chicago 4, Ill. • Representatives in All Principal Cities

Manufacturers of Insulated Metal Walls and Wall Panels; Steel Deck for Roofs, Partitions, and Permanent Concrete Floor Forms; Rolling Steel Doors, Grilles and Underwriters' Labeled Rolling Steel Doors and Fire Shutters.



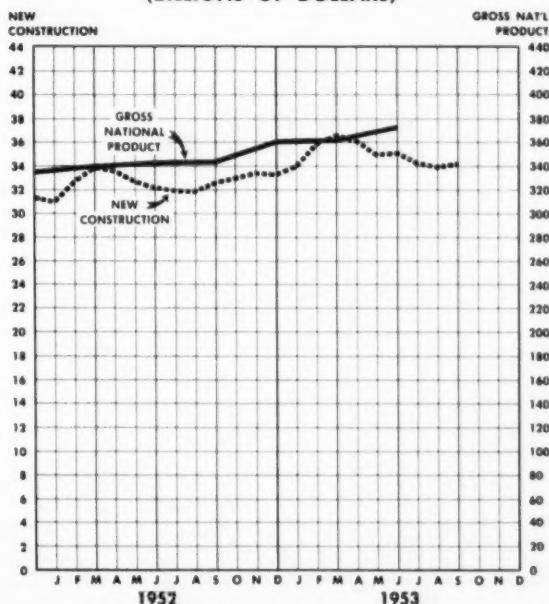
MAHON

● TOTAL Construction Compared with Gross National Product (BILLIONS OF DOLLARS)



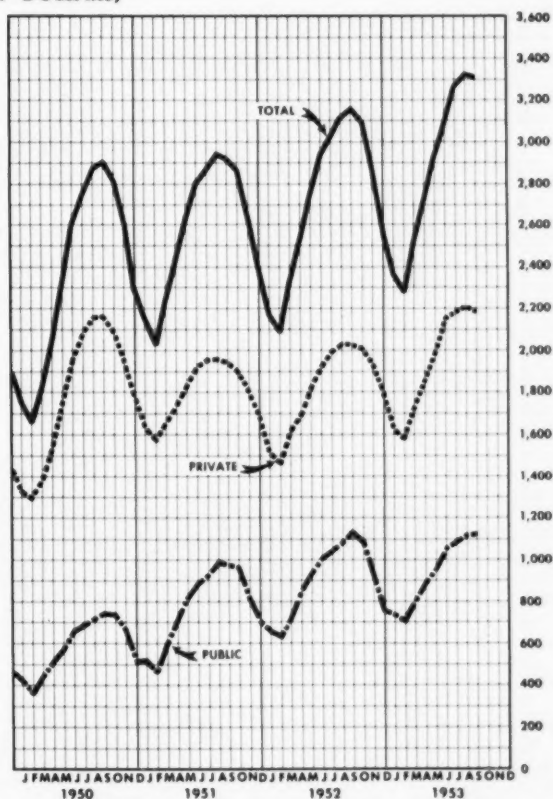
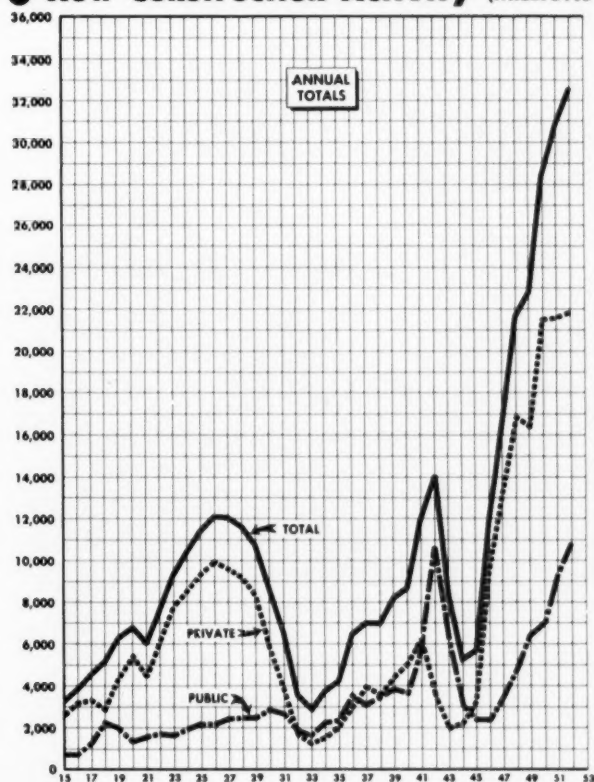
DATA SUPPLIED BY DEPT. OF COMMERCE

● NEW Construction Compared with Gross National Product* (BILLIONS OF DOLLARS)



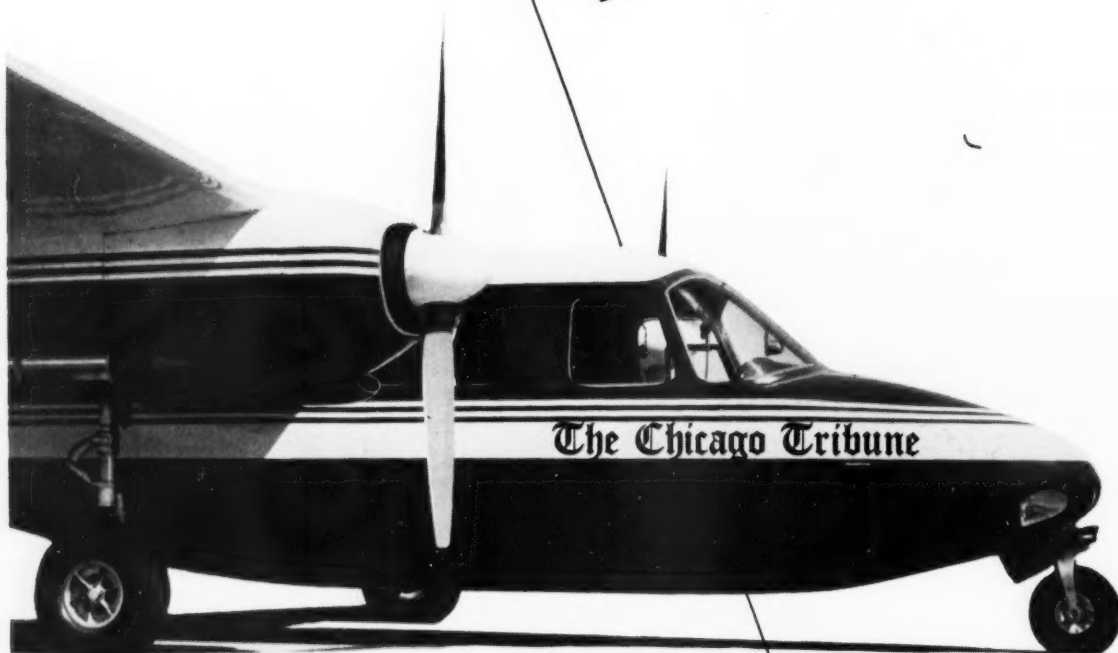
* Seasonally adjusted at an annual rate

● New Construction Activity (MILLIONS OF DOLLARS)



DATA SUPPLIED BY DEPTS. OF COMMERCE AND LABOR

a
nose
for
business



The Chicago Tribune

One of America's great newspapers was among the first to select the 5-7 place Twin Engine Commander for fast, dependable business transportation.



A E R O

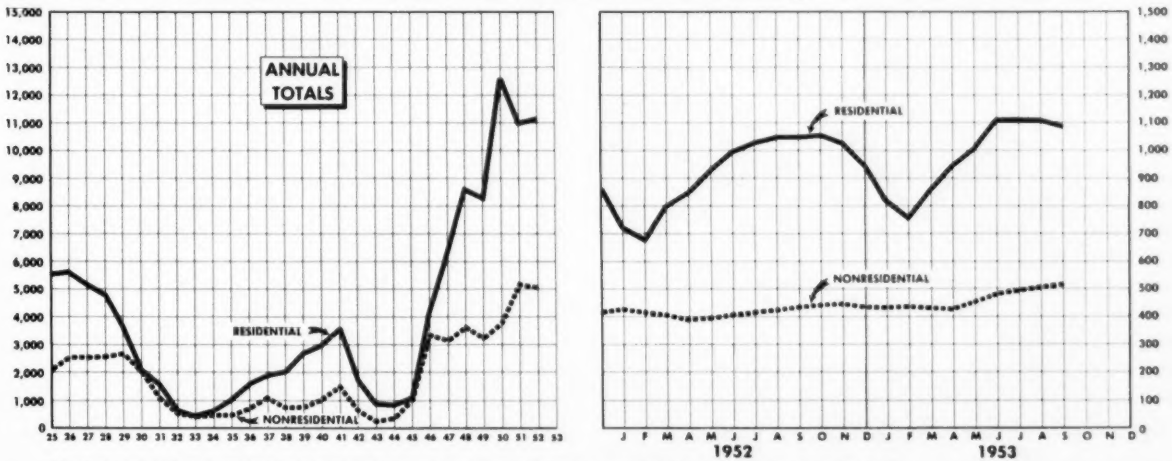
DESIGN

Commander

AERO DESIGN AND ENGINEERING COMPANY
TULAKES AIRPORT • OKLAHOMA CITY, OKLA.

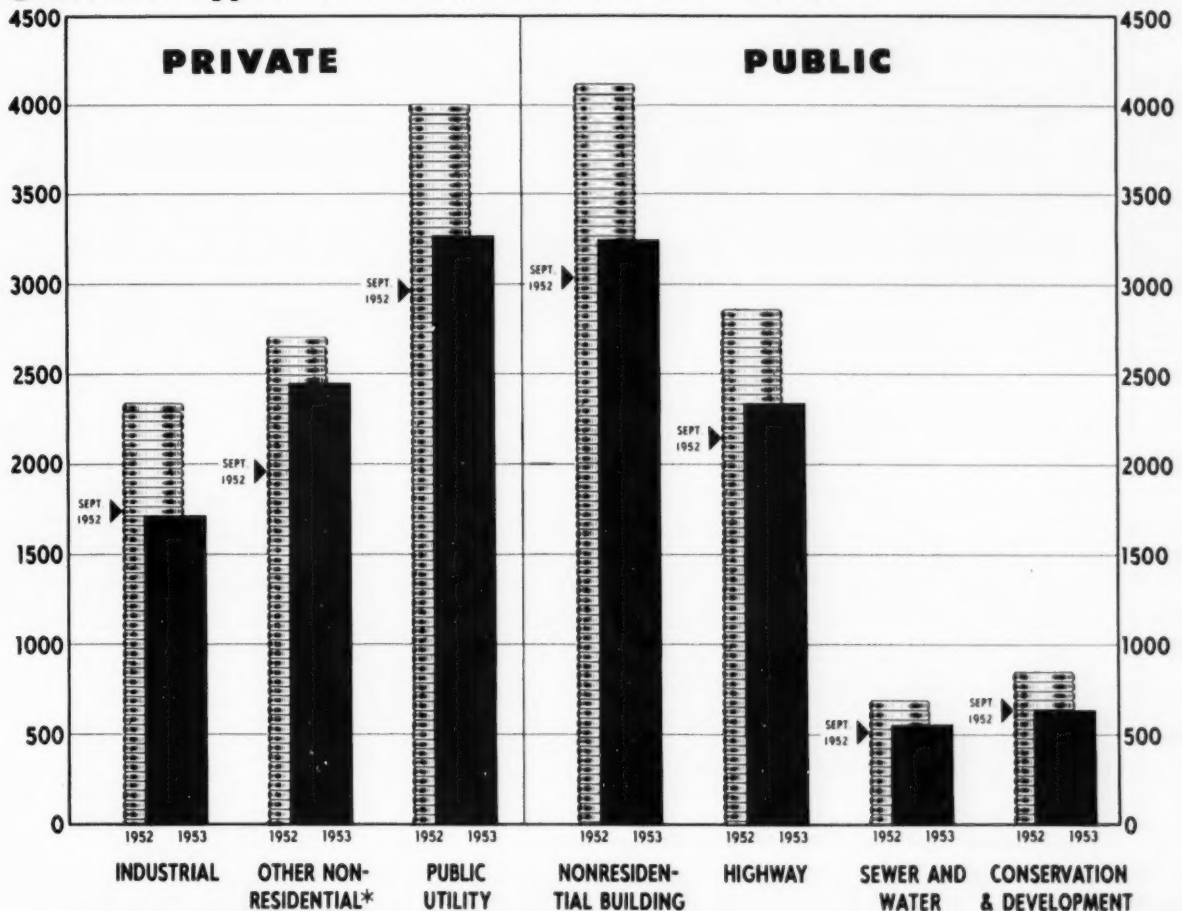
NEW CONSTRUCTION ACTIVITY

● Private Residential and Nonresidential Building * (MILLIONS OF DOLLARS)



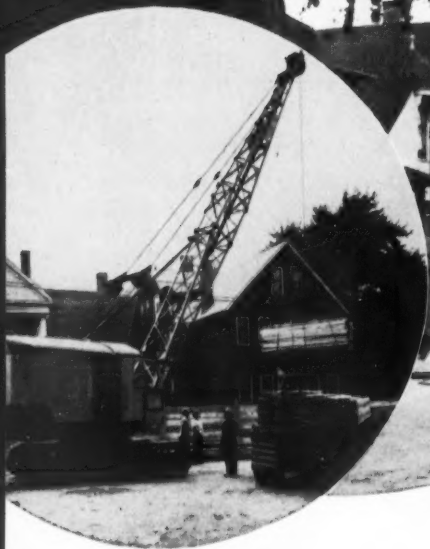
* Residential excludes farm; Nonresidential includes industrial, commercial, institutional, and social and recreational building, but excludes public utility building.

● Selected Types: (CUMULATIVE, MILLIONS OF DOLLARS) 1952, 1953 VOLUME THROUGH SEPTEMBER



*Includes commercial, institutional, and social and recreational building.

NUMBER 28 NORTHWEST



The navy grey cabs of the Northwests of Gargaro Co., Inc., have been known around Detroit for a long time. For years Gargaro Co. has added to their fleet of Northwests as their business grew—and *their business grew each year as they added to their fleet.*

Northwest advantages, quality construction and advanced design—mean money to Northwest owners. This combination alone is the reason why one out of every three Northwests sold is a repeat order in the hands of responsible contractors like Gargaro Co., Inc.

NORTHWEST ENGINEERING COMPANY
1502-8 Field Building, 135 South LaSalle Street, Chicago 3, Illinois

NORTHWEST

SHOVELS • CRANES • DRAGLINES • PULLSHOVELS

for
**GARGARO
CO., INC.**

Detroit, Mich.



For Moderate Income Families in Large Cities

(Formerly referred to as the "Cost of Living Index," compiled by the Bureau of Labor Statistics)

Higher prices for transportation, food, housing, medical care and reading and recreation pushed the August cost of living up to 115, a new all-time high for the third month in a row.

This is the sixth straight monthly increase for the government's Consumer Price Index which now stands 0.6% higher than it did a year ago and 13% higher than June 1950, just prior to the Korean war.

Transportation advanced 0.7% and food, housing and medical care inched up 0.3%, while reading and recreation costs averaged a 0.2% rise. Personal care and other goods and services were 0.1% higher than in July, while apparel prices declined 0.1% over the previous month.

New York City's recent boost in transit rates caused most of the increase in transportation, but higher prices for gasoline and motor oils also added to the rising cost, the Bureau of Labor Statistics said.

The change gives approximately 1.3 million railroad workers a three-cent-an-hour wage boost, since their contract calls for wages to be adjusted every three months to match changes in the cost of living.

The Consumer Price Index, formerly calculated on the base 1935-39=100, was converted beginning January to the new base 1947-49=100 in compliance with recommendations of the Bureau of the Budget.

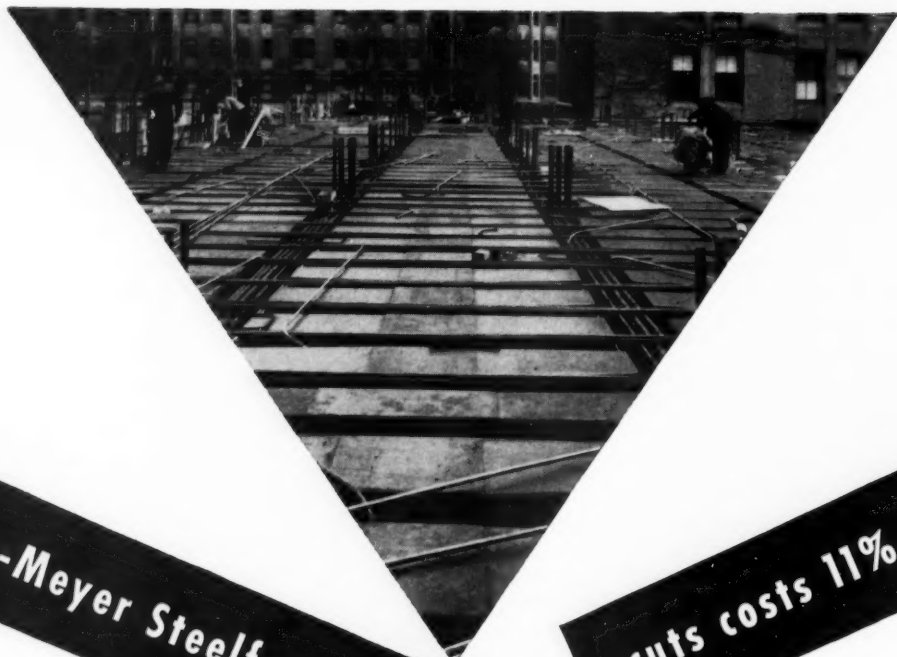
A portion of this index below indicates the average changes in retail prices of selected goods, rents and services bought by the average family of moderate income from June 15, 1951 to August 15, 1953.

They are represented here for use by employers who may wish to take these cost of living data into consideration when contemplating adjustments of wages based on increased living costs.

Aside from the change of the base years, the revised index includes prices of about 300 items, compared to some 200 for the previous index. The "weight" assigned to items is now based on facts concerning family expenditures of wage earners and clerical workers found in a survey on consumer expenditures conducted by the bureau.

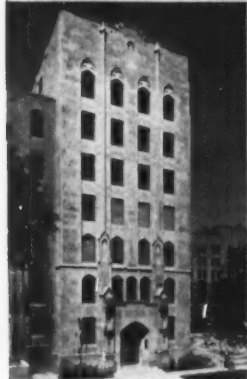
The first five cities in the table below are checked and reported on monthly. The other 15 cities are surveyed and their indexes published quarterly.

	1951			1952			1953		
	JUNE	JULY	AUGUST	JUNE	JULY	AUGUST	JUNE	JULY	AUGUST
Average.....	110.8	110.9	110.9	113.4	114.1	114.3	114.5	114.7	115.0
New York, N. Y.....	109.1	109.5	109.3	110.9	112.3	112.2	112.0	112.1	112.7
Chicago, Ill.....	111.6	112.1	112.1	114.9	115.0	115.5	115.3	115.7	116.3
Los Angeles, Calif.....	111.4	111.7	111.7	114.8	115.0	114.9	115.4	115.8	115.8
Philadelphia, Pa.....	111.5	111.4	111.4	113.6	114.8	114.9	114.6	114.7	114.9
Detroit, Mich.....	111.6	111.7	111.7	113.9	114.6	115.0	116.6	116.9	116.9
Atlanta, Ga.....			113.9			117.0	117.1		
Baltimore, Md.....	110.4			113.0			115.1		
Boston, Mass.....	109.6	109.9	110.1	112.0	113.7	113.7		113.1	
Cincinnati, Ohio.....	109.9	110.2	110.0	112.9	113.4	113.4	114.5		
Cleveland, Ohio.....			111.0			114.0			115.1
Houston, Texas.....	113.6	113.8	114.0	114.9	115.2	115.8			116.8
Kansas City, Mo.....		111.6			115.3			115.3	
Minneapolis, Minn.....	110.9			114.9				115.6	
Pittsburgh, Pa.....	110.5	111.4	111.1	112.2	113.0	113.5		113.8	
Portland, Ore.....		113.0			114.7			115.5	
St. Louis, Mo.....	110.8			115.5			115.8		
San Francisco, Calif.....	110.2			114.9			116.1		
Scranton, Pa.....			109.8			114.0			113.2
Seattle, Wash.....			111.7			114.6			116.8
Washington, D. C.....			110.1			114.1			114.2



Ceco-Meyer Steelform Service

cuts costs 11% . . .



*Ceco-Meyer
Steelform Service
was used in
these 3 buildings*

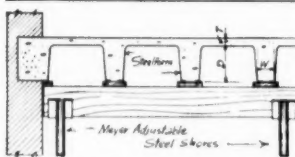
*In construction products
CECO ENGINEERING
makes the big difference*

Economy in building is important, even to a great institution.

So, when Schmidt, Garden and Erickson, Architects, designed three units of a medical center in Chicago, several methods of constructing floor systems were studied. Ceco-Meyer Steelform Service was selected because it offered definite savings. But let them tell the story.

"We made an analysis of several types of construction," say the architects, "including slab-beam-and-girder, solid slab and several others. When the figures were on paper, concrete joist construction showed a saving of 11% in the concrete frame. Ceco was selected to provide Meyer Steelform Service. J. W. Snyder Company, General Contractor, made the indicated savings realistic."

"To complete a major hospital job on time," says Constructor Victor Snyder, "there must be close cooperation between architect, constructor and a supplier who understands our joint problems. Such a firm is Ceco . . . their construction knowledge in the field, and ability to perform, got them the job."



cross section Less steel, concrete, lumber, labor with Ceco-Meyer Steelform Service.

CECO PRE-PLANNING CONSULTATION SERVICE

Ceco Product and Design Specialists will assist you in the application of Ceco building products at the pre-planning stage . . . Call Ceco office for overnight service.

CECO STEEL PRODUCTS CORPORATION

Offices, warehouses and fabricating plants in principal cities
General Offices: 5601 W. 26th St., Chicago 50, Illinois

Sidelights for Contractors

By John C. Hayes, Counsel

Taxes

Tax Reductions.—Under the present tax statutes, the excess profits tax will expire on December 31, 1953. Individual income taxes are scheduled to fall 10% for 1954, while corporate income tax rates, including normal and surtax, are reduced on April 1, 1954, from the current 52% to a rate of 47%. Also scheduled is a reduction in the present 26% maximum rate applicable to long term capital gains to the slightly lower rate of 25%, effective for individuals for years beginning after October 31, 1953, and for corporations for years beginning after March 31, 1954. However, in view of the government's budget troubles, it is doubtful whether all of these tax reductions will be permitted to take effect. To offset the loss of revenue from tax reductions, there is the possibility of enactment of a federal sales tax or of expansion of excise taxes.

Family Partnerships.—Regulations have been issued by the Treasury governing the recognition of gift-created family partnerships. In general they require that the donee acquire his capital interest in a bona fide transaction in which he becomes the real owner of the interest, with dominion and control thereover. On the question of control, points of significance mentioned include the distribution of income, rights to sell or withdraw from the business, and powers over assets and management. Substantial participation by the donee in management is stated to be a favorable factor, as is actual distribution to him of all or a major portion of his distributive share of the business income. The regulations also set forth the standards for recognition as partners of trustees and minor children.

Income Earned Abroad.—Other regulations recently issued by the Treasury concern the \$20,000 per taxable year limitation imposed by the Technical Changes Act of 1953 on the exclusion from gross income of earned income from sources without the United States by a citizen absent from

the country for 17 out of 18 consecutive months. A taxpayer abroad for less than the required period may request the district director to grant him an extension of time for filing his return until the exemption requirement is met. In filing a declaration of estimated tax, a taxpayer need not include income which he reasonably believes will be excluded.

Personal Holding Company.—The bureau has published a ruling that a delinquency penalty is not to be asserted against a personal holding company for failure to file a timely return as a holding company in any case in which attributable to reliance in good faith upon the advice of a reputable attorney or accountant, experienced in tax matters, to whom all relevant information has been furnished.

Accounting Method.—Where a plumbing and heating contractor consistently kept his books and reported income on the cash basis of accounting, the Tax Court held that such method clearly reflected income although the contractor earned substantial sums during the year that were not paid and reported until later years. The court refused to accept the Commissioner's argument that the cash basis reflected income clearly only from the contractor's small and not from large contracts and that he should be put on the accrual basis of accounting.

Federal Tax Lien.—A district court has decided that, under Georgia law, a mortgage, even though unrecorded, is superior to a subsequent lien created by law. The court upheld a chattel mortgage as superior to a federal income tax lien which arose after the execution of the mortgage but which was prior thereto in time of recording.

Terracing Farm Land.—Expenses incurred for moving earth into ridges and channels to overcome and reduce erosion developed on farms after they have been in cultivation are deductible as ordinary business expenses and need not be capitalized, according to a Tax Court decision. On the analogy

of certain cases of industrial property where large expenditures were made to correct a physical fault in the earth causing cave-ins or seepage of water through the earth into buildings, the court felt that such costs were essentially repairs rather than improvements.

Sale of Partnership Assets.—A district court concluded that partners had sold partnership assets or stock in trade rather than their partnership interests and had realized ordinary income, not capital gain, where the terms of sale excluded certain assets, including some partnership contracts subsequently settled by the partnership, which continued for some months to operate as a unit.

Accrual of Income.—The Government has decided not to request review by the Supreme Court of the circuit Court opinion reported in the August *Sidelights* upholding a construction company on the accrual basis of accounting in not reporting as income in 1943 the retained percentage of its fee under a government cost-plus contract, where the project was completed in 1943 but final acceptance by the government's representatives and the final audit did not occur until 1944.

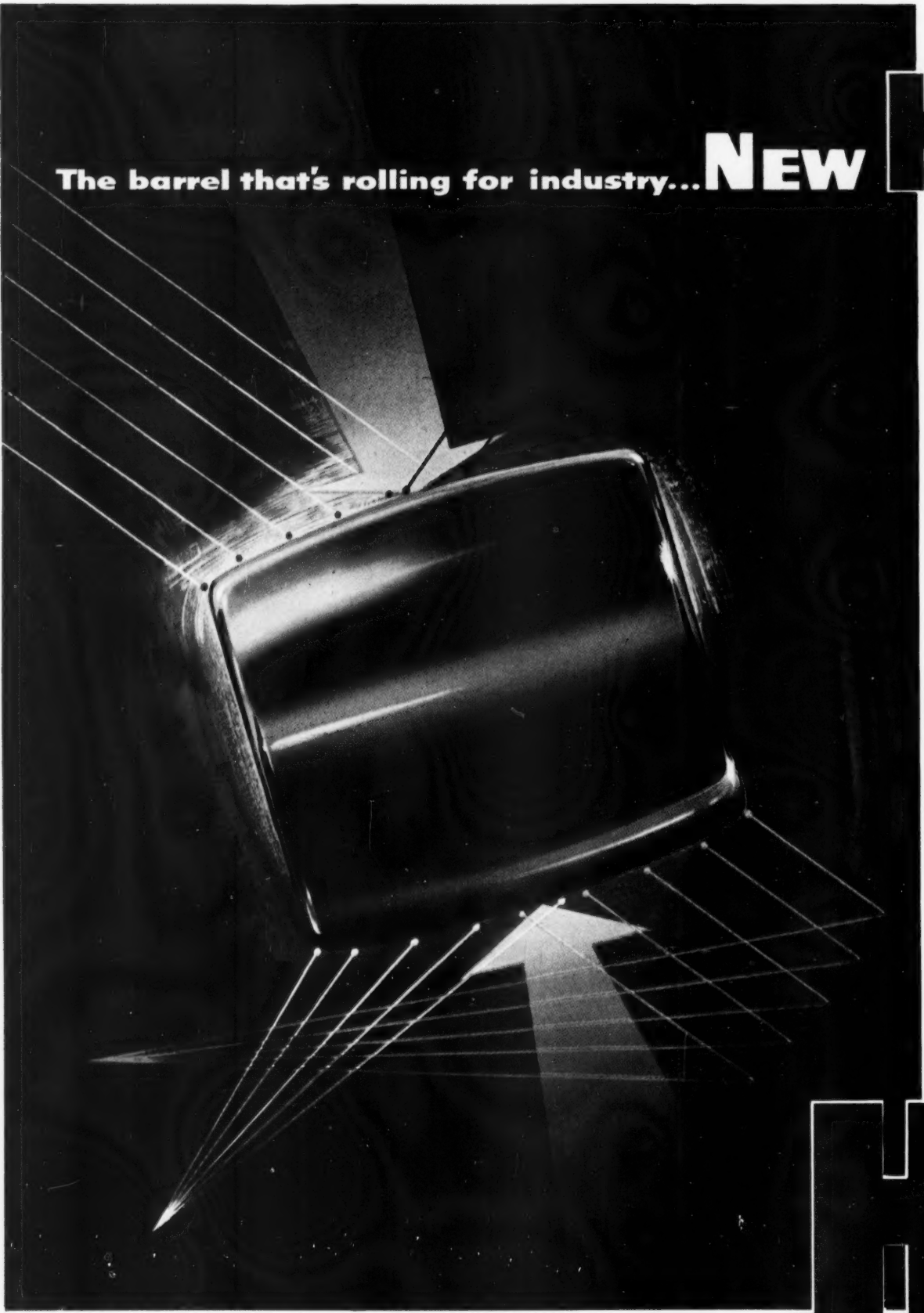
Loan to Stockholders.—The Tax Court has ruled that retention by a sole stockholder of corporate funds resulted from a bona fide debtor-creditor relationship and did not amount to a taxable dividend. While the stockholder did not sign notes or pay interest, the account between him and the corporation was carefully kept and the stockholder often had a credit balance.

Public Contracts

Subcontractor's Bond.—A surety on a government subcontractor's performance bond, a circuit court ruled, cannot be held liable to the prime contractor for damages on default in excess of the face amount of the bond, although the surety promised to perform the contractor's obligation if the latter defaulted.

The barrel that's rolling for industry... **NEW**

H



HYATT BEARINGS DIVISION, GENERAL MOTORS CORPORATION

H

YATT BARREL BEARING

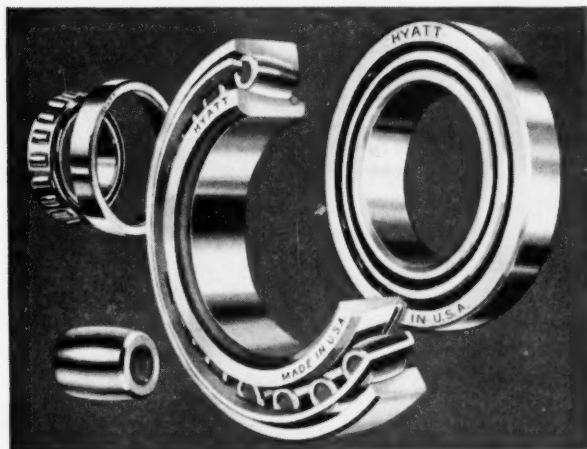
now available

in volume!

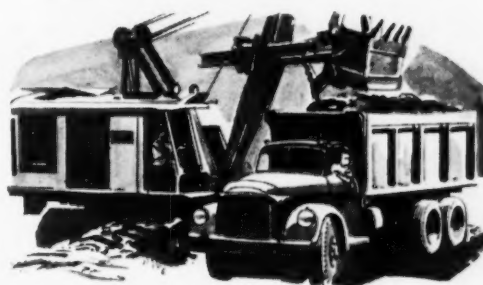
Hyatt is rolling out the barrels! . . . and a familiar shape is giving a big lift to modern industry! A new Barrel Bearing—pioneered and perfected by Hyatt—is available in volume for the first time! There's no other bearing quite like it—and it's ready for a starring role in industrial production!

The Barrel name comes from the barrel shape of the rollers . . . but its superiority in bearing applications comes from *dual-purpose design and self-aligning ability!* This unique bearing takes load from any direction . . . and operates at full load-carrying capacity under conditions of misalignment! And in addition, the barrel shape of the rollers combines the low rolling friction of a ball with the high load capacity of a cylindrical roller—so that the Barrel Bearing is ideal for a wide range of applications.

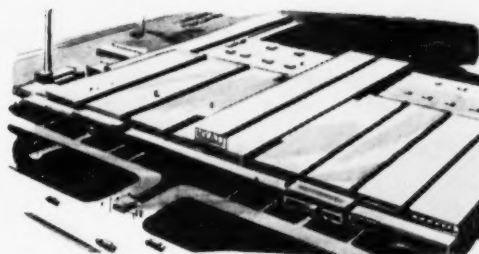
Expensive? *Not at all!* Advanced manufacturing processes—plus the facilities of one of the newest and finest bearing plants in the world—make the initial cost far lower than you would expect! . . . For full information on this newest solution to the friction problem, write to the address below.



Self-aligning action makes the Barrel Bearing ideal for tractors and farm implements. Over many years, its durable, dependable performance has been established in a wide range of these applications.



In trucks and construction equipment, too, Hyatt's Barrel Bearing operates with full efficiency under conditions of heavy, multiple-direction loading. Unique roller and race design distributes the load over large areas of contact.



Hyatt's new plant, in Clark Township, N. J., is among the most modern in the world. New equipment makes possible advanced manufacturing processes, and research facilities are the finest in the bearing industry.

YATT

ROLLER BEARINGS

HARRISON, NEW JERSEY



FLOOR SLABS



ROOF SLABS



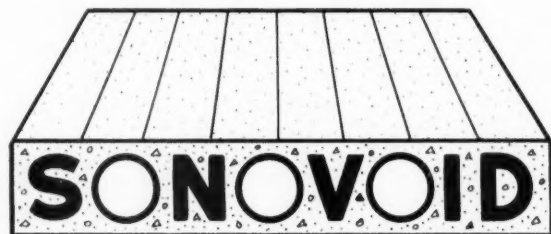
BRIDGE SLABS

Now...You Can Form CONCRETE SLAB VOIDS

at low Cost!

Save CONCRETE!
Save STEEL!
Save MONEY!

with



LAMINATED FIBRE TUBES

Low cost SONOVOID fibre tubes were specifically designed for use in concrete roof, floor, wall and bridge deck slabs. SONOVOID creates a void, thereby lightening the slabs for economy and ease of handling, by displacing the concrete near the neutral axis which does little work. SONOVOID permits the pre-fabricating of prestressed and poststressed slabs—saves concrete and reinforcing steel. Sizes, 2" to 36.9" O.D., up to 24 feet, or longer on special order. Can be sawed to lengths on job.



Write Today for Details!

SONOCO PRODUCTS COMPANY

Construction Products Division
LOS ANGELES, CAL. 9005 SOUTH WESTERN AVE. HARTSVILLE, S. C. — MAIN PLANT MONTCLAIR, N. J. 14 SOUTH PARK STREET
GARWOOD, N. J. BRANTFORD, ONT. AKRON, IND.

Policy on Bidding Errors

A firm stand on a fundamental principle of competitive bidding was taken by the Governing and Advisory Boards of The Associated General Contractors of America at its Mid-Year Meeting in Chicago last month. The Boards adopted a resolution stating that:

"This association is opposed to the award of any government construction contract at an adjusted price where such adjustment in price has been made because of a plea of error on the part of the bidder."

This action, with respect to public works contracts, is along the same lines as the latest revision of the document, *A Suggested Guide to Bidding Procedure*, developed jointly and approved by the A.G.C. and American Institute of Architects. The following was added to this document developed for private building construction:

"If after bids are opened, the low bidder claims that he has made an appreciable error in the preparation of his bid and can support such claim with the owner and the architect, he should be permitted to withdraw his bid.

"In such instances the award of the contract should be made to the next lowest bidder.

"Under no circumstances should a bidder be permitted to alter his bids after bids have been opened, except in accordance with the first sentence of the following item (j), entitled 'Changes'."

The need has arisen during the past two to three years for a clear statement of policy on how to handle bids after they have been opened in cases where the low bidder can demonstrate that he has made a substantial error in the preparation of his bid.

While the policy of the federal government has not been clearly defined, there have been some cases where the government has permitted the upward adjustment of the low bidders price on a claim of error so that the adjusted price comes close to that of the second bidder.

The A.G.C. Contract Forms and Specifications Committee pointed out in the resolution which it recommended that such a practice is not in accordance with the principles of competitive bidding and will undermine and destroy the very basis of competitive bidding.

The committee did recognize that there can be cases in which the low bidder could make a typographical or other kind of error of such magnitude that the contractor would go broke if held to his bid. The association's recommendation in such an event is that the bidder be permitted to withdraw his bid when he can substantiate his claim of error. The committee and the Heavy Construction and Railroad Contractors' roundtable meeting in their discussions both refrained from making further recommendations for government policy.

It will be to the advantage of the government and the industry if all governmental awarding agencies adopt a clearly stated policy with respect to bidding errors.

Subcontractor Legislation

The Governing and Advisory Boards of The Associated General Contractors of America, at their Mid-Year Meeting in Chicago in September, again gave thorough study and consideration to proposed legislation to regulate the bidding and award of subcontracts on federal public works projects.

The conclusion arrived at was that the proposed "Federal Construction Contract Act," before Congress in S. 848 and H.R. 1825, is exceedingly complex legislation which is detrimental to the public interest because:

1. It would establish an unworkable method for the bidding and award of subcontracts which would endanger the present system of contracting by which the government secures the maximum value for its investment in federal public works projects.

2. It would increase the cost of construction to the government.

3. It would encourage the weakening of competition for subcontracts.

4. It would increase the legal and administrative responsibilities of government agencies.

5. It would not be effective in regulating business ethics, which can be improved by voluntary action of the various groups in the construction industry.

6. It would set a bad example to states, municipalities and private industry by limiting free competition.

Evidence was presented that national associations of mechanical specialty contractors, their members, and unions with which they work were putting the strongest kind of political pressure on members of Congress for the enactment of the legislation during the next session.

The complexity of the legislation makes it difficult for persons not actively engaged in the construction industry to understand its full implications.

There is the need, therefore, for general contractors and others to explain to members of Congress how such legislation is detrimental to the public interest, and to demonstrate that there is widespread opposition to the bills.

There has been unrest in the relationships between general contractors and subcontractors. The proposed legislation, however, would not be effective in improving the relationships.

The vast majority of general contractors and mechanical specialty and other subcontractors do conduct their business relationships in an ethical manner. Action by responsible groups in the construction industry to develop new codes or make old ones more universally understood can do more than legislation can to improve the ethics of business relationships.

Because it is detrimental to the public interest the proposed legislation should be defeated.

Over half a century ago Lidgerwood made a promise

"All of our hoists are built on the duplicate part system. This is a most important feature because it insures our customers of always being able to purchase repair parts."

From a 1901
Lidgerwood Catalog



Division Order
BEIERS SCHNEIDER COMPANY, INC.
HARTFORD, CONNECTICUT

TO: SUPERIOR LIDGERWOOD MUNDY CORPORATION
SUPERIOR, WISCONSIN

PLEASE ENTER YOUR ORDER FOR THE FOLLOWING:

For 2 drum
Steam Hoist
#4472
—SHIPPED 3/28/88

PURCHASE ORDER
PYATT & SMITH BUILDERS SUPPLY CO.
PITTSBURGH AND BRIDGEVILLE, PENNSYLVANIA

TO: SUPERIOR LIDGERWOOD MUNDY CORPORATION
SUPERIOR, WISCONSIN

Parts for a 10x12
type engine
—BUILT IN 1889

AND
HERE'S PROOF
POSITIVE

BRISTOL IRONING AND SMELTING CO. LTD.
BRISTOL, ENGLAND

TO: SUPERIOR LIDGERWOOD MUNDY CORPORATION
SUPERIOR, WISCONSIN

For 8 1/2 x 10 DD
Hoist Serial #9327
—BUILT IN 1893

TODAY—we furnish parts for Lidgerwood and Mundy hoists which were built over sixty-five years ago. We've kept our promise! In addition, we have proved by the test of time—the toughest test of all—that Lidgerwood hoists are built to last!

Write for bulletins and catalogs!

FROM THE
J. E. BISHOPMAN COMPANY
PHILADELPHIA, PENNSYLVANIA

ORDER NO. 1734

TO: SUPERIOR LIDGERWOOD MUNDY CORPORATION
SUPERIOR, WISCONSIN

Mundy Hoisting Machine
—BUILT IN 1892

Superior—Lidgerwood—Mundy Corporation

MAIN OFFICE AND WORKS — SUPERIOR, WISCONSIN

NEW YORK OFFICE — 7 Dey St., New York 7, N. Y.

» THE construction industry during 1953 will complete the largest volume of work in its history, and the competition between general contractors for new work coming on the market, which already was extremely keen, has been intensifying during the year.

Materials and construction machinery and equipment are readily available and stabilized in price with the exception of fabricated steel and cement which are in short supply in some areas. There has been constant pressure for wage increases.

These are the highlights of conditions in the construction industry revealed in a nation-wide telegraphic survey conducted by The Associated General Contractors of America among its 122 chapters and branches and 84 elected directors. The results of the survey were presented to the mid-year meeting of the Governing and Advisory Boards by A.G.C. Past-President Walter L. Couse. It covered prospects for the six-month period, September 1953 through February of next year.

Competition Roughest Since 1940

On the basis of the replies to the survey, it is expected that the industry will attain the volume in new construction of more than \$34 billion predicted early in the year. While an A.G.C. survey made last March (See THE CONSTRUCTOR, April, 1953) reported the roughest competition in the industry since 1940, the present query brought forth the almost unanimous response that it had gotten even more severe and would continue to intensify. Competition of this intensity in a year in which the largest volume of work in its history is being put in place is an indication of the capacity of the industry.

Only one contractor in the survey reported less competition ahead in the next six months, and just six estimated that it would remain stabilized at its present high level. Ninety-four per cent of the replies said bidding successfully for jobs would become increasingly difficult.

Contractors gave the following reasons for the stiffening competition:

1. Contractors have grown greatly both in numbers and capacity. New equipment and methods have increased their mechanical and over-all efficiency. Small firms are entering the market of larger projects. More firms are bidding on more jobs and crossing state lines to get them. Typical is the comment of one contractor:

Competition Is Intensifying In Construction, Survey Shows

- Competition Due to Industry's Greater Capacity
- Materials and Equipment Are Readily Available

"On local jobs of over \$1,000,000, contractors from other states now frequently outnumber local bidders. This was not true six months ago; contractors are going increasingly further afield seeking work."

2. New, inexperienced bidders are forcing down bids in an attempt to get started. Contractors who are entering other construction categories also are bidding low. Home builders, for instance, are entering the commercial field because of a decline in residential construction. Many of the new contractors and those entering new fields do not have accurate cost data in their new fields.

3. Large contractors are bidding to get jobs to hold their crews together and keep their equipment operating. Many seem to be trying to keep their volume and maintain their organizations on an expanded basis.

4. The slowing down of government construction and the tapering off of defense work have thrown government contractors into private work.

5. Some contractors are uncertain about the future, concerned about next year's volume. They believe the country is in for a period of readjustment and are taking everything they can get now in an effort to build a backlog.

The pessimism of contractors holding this last point of view seems to be based in some cases on indications that the rate of increase over 1952 will probably decline moderately in the second half of this year, reflecting a smaller rise for the last six months than usual.

New construction for the first six months of this year totalled \$16 billion, almost 8% above the figure for the same period in 1952. The \$34-2/3 billion total forecast for this year would be 6% greater or \$2 billion more than last year's volume.

A contractor from the Far West who forecast a slight rise in highway construction in his area but declines in building and heavy construction, said:

"In my opinion, the slowing down which all of us have been anticipating

for a number of years is arriving. I do not expect it to be cumulative and do anticipate on the contrary that it will be over within a year's time and that the construction industry will absorb the slowdown without any serious consequences."

Another report from the Far West attributed the present intensity of bidding to "a leveling off of our national economy—and justly so."

Big Highway Increase Seen

The survey indicated that there would be more work during the next six months than in the previous six months in all three categories of construction—building, highway and heavy. The greatest jump was forecast for highway construction, and the smallest increase was predicted in building work.

Seventy-six per cent of the respondents to the poll reported that highway construction would be either greater or at the same high volume than in the previous six months. Forty-three per cent said it would be greater, 33% indicated it would be the same, and 24% forecast that it would be less.

In heavy construction, 57% of the respondents were of the opinion that the volume of work for the next six months would be greater or the same as in the past six months. This was made up of 24% who looked for an increase and 33% who expected it to maintain its present pace.

Twenty-one per cent of the reports were for an increase in building work for the next six months, and 30% said it would be at the same level, giving a total of 51% reporting a volume in this branch of construction either greater or equal to that of the past six months.

Commercial, School Gains

Most significant trends to emerge from the replies to the survey were the predicted declines in industrial construction, and gains in commercial and school construction. The situation in public works is apparently going to remain fluid with the decline in fed-

eral work being made up somewhat by an increase in state, municipal and county contracts.

With 98% of the survey replies stating that materials were readily available (with the exception of the above-mentioned slow delivery of steel and cement) and 71% forecasting that materials prices would remain stable in the next six months, it is evident that contractors will experience no headaches in this quarter.

Pressure for increased wage rates were expected by 60% of those polled. Thirty-eight per cent, most of whom have recently signed contracts with labor, expect no new wage demands. Only 2% expect wages to decline.

Regionally, the survey gave the following picture:

New England—The outlook for highway and heavy construction is the rosier part of the picture for this area. All replies forecast either a rise or the same high rate of highway construction, with 75% predicting an increase.

An increase in heavy construction is expected in 50% of the replies; 25% look for maintenance of the present volume—giving 75% expecting either an increase or the same volume. Predictions for building work are evenly balanced with just as many expecting an increase as look for a decline.

Middle Atlantic—Heavy and building construction are the categories in which the greatest increases are expected. Sixty-five per cent foresee either the same volume or an increase. Sixty-seven per cent are of the same opinion for heavy construction. A definite trend to commercial work and a decline in industrial construction were reported for this area. Big heavy and highway projects are attracting bidders from other areas.

South—Increases predicted in highway and heavy work, building to remain stable. School construction and commercial work increasing, with industrial and residential diminishing. Competition was reported to be "murderous."

One chapter manager said that "tight money" is blamed for the trend of house builders to small commercial jobs and the shift of the small commercial builders to larger jobs and industrial work.

"Housing and small commercial jobs are hard to finance," he said, "and contractors are switching to

more active categories. Some of them seem to be bidding against competition rather than costs plus a reasonable profit."

One reply stated:

"Bid prices by general contractors are becoming more and more unpredictable. Subcontractors' bids to general contractors show in many instances, a wide variation, and general contractor bids are the lowest since the war. It is believed that this will continue.

"Competition is exceptionally intense. It is to be noted that the list of bidders for each job is increasing and that contractors are coming from greater distances. All indications are that this situation will get worse rather than better."

Delays in the delivery of steel and cement are being experienced in the South, especially steel.

Middle West—Building work is expected to continue at the same level, highway to increase and heavy construction work to decrease. Somewhat of a shift to commercial and school work predicted. Fabricated steel and cement shortages were noted.

The Akron Chapter of A.G.C. reported that Akron is having the biggest year in its history and expects a 20% increase in building construction. Schools, the chapter said, make up a large portion of the building volume.

"Half of our bidders are coming from out of town because this year Akron is the 'bright spot' on all types of work in Ohio," the chapter reported.

The Ohio Turnpike and state highway programs calling for an unusual number of bridge highway underpasses as well as school, hospital and industrial plant construction in the Youngstown area also contribute to the prosperous Ohio picture.

The Associated General Contractors of Iowa said its highway and heavy work next year will be 30% greater than in 1953.

Southwest—Reports from this area show it to be one of the most optimistic in the country regarding construction prospects in the next six months. Increases in volume are predicted for all three categories. Seventy-eight per cent of the replies are for either an increase or continuation of the present volume of highway work. Forty-four per cent of this total see a rise in highway volume.

In the heavy construction category, 80% of the answers expect an increase

or see no diminution in work. Fifty-eight per cent are of the same mind about building construction. Conforming to the national pattern, this area looks for an increase in commercial and school construction.

Here again, as in the South and elsewhere in the country, house builders were reported with a diminished market due to financing difficulties and were infiltrating other construction markets. Steel deliveries were said to be slow throughout the Southwest and clay products were in short supply in Texas.

Rocky Mountain—Building, highway and heavy to increase. A population increase in Colorado in the Denver area was reported to be causing a building boom. The largest annual building volume in the history of Denver is expected. A considerable curtailment in residential building is being more than made up for by job offerings in the commercial and industrial field.

Far West—This area presents the most fluid situation, with a sharp rise expected in highway construction and substantial declines looked for in building and heavy work. Eighty-four per cent of the replies say there will be an increase in highway work and 8% state that it will continue at the same level. Seventy-seven per cent look for a drop in building work and 63% see less heavy construction in the next six months.

Making It Even Tougher

As if competition weren't tough enough, some contractors, on Navy work at least, are making errors in submitting bids which could easily affect the final award of the contract. In a recent survey of 59 bid openings for projects in the Sixth Naval District, Capt. S. P. Zola, district public works officer, found that out of 289 bids received, 43 contained a total of 48 errors.

Capt. Zola said the errors were made through failure to comply strictly with "Instructions to Bidders." These errors were made:

1. Failure to acknowledge all addenda—25.
2. Failure to fill in "gratuities" statement—18.
3. Failure to provide bid security—4.
4. Failure to sign bid bond—1.



Rear Admiral Joseph F. Jelley, Jr., who will retire as chief of the Bureau of Yards and Docks on December 1, has taken over the job of director of construction in the office of Assistant Secretary of Defense for Properties and Installations Franklin G. Floete. He has become well known to A.G.C. contractors as head of one of the federal bureau's largest contract awarding agencies.

C. P. Street, president of The Associated General Contractors of America, (extreme right in photo below), was one of seven prominent businessmen asked to select the 1953 "Industrialist of the Year."

Their selection is George W. Merck, chairman of the board, Merck & Co., Rahway, N. J., large-scale producers of penicillin, streptomycin, cortisone and other "wonder drugs." The Society of Industrial Realtors will present him with the award in Los Angeles next month.

Others serving with Mr. Street on the impartial board of selection were (left to right): Roger H. Ferger, editor and publisher of the *Cincinnati Enquirer*; William T. Farley, president, American Association of Railroads; Walter S. Schmidt, past president, Society of Industrial Realtors; Eric Johnston, president, Motion Picture Association of America; Frederic B. Martin, president, Society of Industrial Realtors; and Charles R. Sligh, Jr., president, National Association of Manufacturers.



Pennsylvania Builders Must Pay Sales Tax

• Ruling Forces 1% Levy on Contractor Material Purchases

» CONTRACTORS will be required to pay Pennsylvania's new 1 per cent sales tax on materials they buy for use in state and other public improvement projects, as well as in private construction work, according to a ruling announced Sept. 2 by the State Revenue Department's Sales Tax Division.

Observers pointed out that imposition of the tax on materials used by contractors doing state jobs may ultimately cost the state hundreds of thousands of dollars as a result of higher bids on public improvement projects. However, the state will make no direct payment of a tax to itself. Suppliers who provide contractors with materials for public and private jobs will be charged with collecting the levy and will receive a 3 per cent commission for such collections.

Materials used in construction work, whether under private or public construction contracts, will be exempt from the tax in instances where awards or agreements were made prior to Sept. 1, when the levy went into effect.

Will Up State Building Costs

State Revenue Department officials declined to estimate how much the new ruling on construction work would cost the state in additional construction costs during the two-year period covered by the present sales tax law.

Pennsylvania state agencies plan to spend nearly a billion dollars for construction during the two years, including \$225,000,000 for contract roads and more than \$115,000,000 by the General State Authority. Further millions will be spent by local governments, municipal and school authorities. There is no immediate way of determining, however, what percentage

will be spent for materials. Labor accounts for the bulk of construction costs.

Big Projects Get Under Way

In addition to the state highway and authority work scheduled during the next two years, new school building construction in Pennsylvania during the period is expected to total \$200 million, while a similar sum is slated to be spent for the Northeastern extension of the Pennsylvania Turnpike to the vicinity of Binghamton, N. Y., by way of the Scranton-Wilkes-Barre area.

Among other Pennsylvania construction projects are a \$15 million tunnel program at Pittsburgh, a \$2 million harbor improvement at Erie, \$1 million for flood control and \$1 million for armory construction. The State Sales Tax Division's ruling including building materials used for public construction in the tax category says:

"The contractor shall be deemed to be the consumer or user of all tangible personal property, purchased, stored, used or consumed by him in the performance of any construction contract and the tax shall apply to the sales of such tangible personal property to the contractor irrespective whether his contract is with a governmental agency or entity or persons exempt as an ultimate consumer from payment of the tax."

Terrell Will Lead A.S.C.E.

Daniel V. Terrell, of Lexington, Ky., has been elected president of The American Society of Civil Engineers. He is dean of the College of Engineering, University of Kentucky. Dean Terrell will be installed this month at the society's annual meeting in New York City.

He was graduated from the University of Kentucky in 1910 and has been on its faculty for forty years. For almost four decades he has been active in highway engineering research. Dean Terrell has since 1942 been director of the Kentucky State Highway Research Laboratory.

He is a past-president of the Kentucky Section of A.S.C.E. and has also served as president of the Kentucky Society of Professional Engineers. He will succeed Walter L. Huber.

A.G.C. Leaders Plot Association Course at Mid-Year Board Meeting

- MacLeod and Koss Nominated to Head Organization
- Relations With Labor and Subcontractors Aired

» THE broad program of The Associated General Contractors of America for taking positive action to enable general contractors to execute their work most effectively was reviewed in detail and approved by the Mid-Year Meetings of its Governing and Advisory Boards held at the Edgewater Beach Hotel, Chicago, September 14 to 16, 1953.

At three Board sessions, separate roundtable discussions for building, highway, and heavy construction contractors, and at meetings of numerous committees and the A.G.C. Secretaries' and Managers' Council, the more than 300 representatives of A.G.C. members from all parts of the country and Alaska also thoroughly analyzed industry conditions and made recommendations for future association actions.

MEETING DETAILS IN OTHER DEPARTMENTS

Industry Conditions	21
Labor Relations	29
Subcontractor Relations	32
Apprentice Training	34
Building Contractors' Division	39
Heavy—Railroad Division	42
Highway Contractors' Division	45
Construction Equipment	52
Accident Prevention	57
Managing Director's Report	62
Secretaries' Council	78

As provided in the bylaws, the Boards nominated John MacLeod, Macco Corp., Paramount, Calif., the current vice president, for president in 1954. George C. Koss, Koss Construction Co., Des Moines, Iowa, was nominated for vice president. Elections for officers and directors will be made by mail ballot in December. Installations will be at close of the 35th annual convention next March.

President C. P. Street, McDevitt & Street Co., Charlotte, N. C., opened the three-day meeting by welcoming the members of the Boards, chapter presidents and managers, and others and commended them for demonstrating their willingness to work for improvement of the industry and the A.G.C. He reported that association

actions had been carried out in accord with established policies, and that ample opportunity would be afforded for questions and discussions.

A comprehensive report on the principal activities of the A.G.C. since the 34th annual convention last March was presented by Managing Director H. E. Foreman. He stated that the "association continues to follow that sound policy of depending upon principles and foregoing expediency on all matters that it embraces." (Text of report on Page 62.)

He also reported that in the reorganization of the national staff, so that it could handle the continuously growing volume of work most effectively, J. D. Marshall had been appointed executive director and C. S. Embrey had been appointed assistant executive director.

The results of an A.G.C. survey on conditions in the industry were reported by Past President Walter L. Couse, Detroit. The survey showed that while the largest volume of construction in history was being put in place, the competition between general contractors for new work coming on the market, which already was extremely keen, had been intensifying during the year. There was optimism for a continued large volume of work next year. (Details of the survey start on Page 21.)

While no action was taken by the Boards, it was generally recognized that bids should be based on carefully studied and accurate estimates of costs, that there should be no relaxation in high standards of workmanship, or integrity of the industry.

Subcontractor Relationships

Careful and thorough study again was given to the subject of the relationships of general contractors and subcontractors, and to the bills in Congress (S. 848 and H.R. 1825) for a proposed "Federal Construction Contract Act."

Reports were made by two committees that the bills, which would require general contractors in their bids on federal public works projects to name

their proposed mechanical specialty subcontractors and the amounts of their offers, were so complex that their full implications can scarcely be understood by persons not actively engaged in the construction industry.

The Boards voted continued active opposition to the bills as detrimental to the public interest after extended discussion and reports by Earle J. Wheeler, Frank Messer & Sons, Inc., Cincinnati, chairman of the Subcontractor Relationships Committee, and by Frank W. Robertson, Robertson-Henry Co., Huntington, W. Va., chairman of the Legislative Committee.

The A.G.C. position has been consistently that in actual operation the bills would be contrary to the public interest, would not accomplish their alleged purpose of preventing bid shopping or bid peddling, would decrease competition for subcontracts, and that business ethics can be improved more effectively by action of responsible groups in the industry than by legislation. (Text of a statement outlining conclusions of the Board meeting on the subject starts on Page 32.)

Labor Relations

Following a day-long meeting, the Labor Committee recommended a resolution which was adopted by the Boards that the A.G.C. "for the best interests of the construction industry and the public vigorously resist any further increase in wages or fringe benefits."

Criticism was voiced of administration of the Davis-Bacon Act, by which the U. S. Department of Labor predetermines wage rates and working conditions prevailing in areas where federal projects are to be undertaken, and supervises enforcement.

The staff and committee were authorized to confer with the new Secretary of Labor, when appointed, to seek impartial administration of the act in the future. Recommendation also was made that legislation be sought, if necessary, to permit court review of the Department's quasi-judicial actions in administering the act.

Chairman Arthur H. Wells, John Griffiths & Sons Construction Co., Chicago, presented the reports. (Further details on Page 29.)

Valley Authorities

Two resolutions relating to valley authorities were recommended in the roundtable discussions of the building and heavy construction contractors and

adopted in which the Boards:

"Reaffirm their long standing opposition to valley authorities such as the Tennessee Valley Authority and to their day labor practices as not being in the taxpayers' best interest, and because public funds are best safeguarded when public works projects are executed by contract.

"Restate their opposition to valley authorities in general and condemn in particular the disruptive wage-setting practices of the TVA which, through its labor agreements, provide wage rates and working conditions which greatly exceed those actually prevailing in private industry in most vicinities where TVA work is performed, and again call upon Congress to investigate these arbitrary actions which result in waste and inflation."

Contracts and Specifications

The Contract Forms and Specifications Committee, headed by Geo. H. Atkinson, Guy F. Atkinson Co., South San Francisco, reported that an increasing number of low bidders on government construction projects have claimed errors in the preparation of their bids and have asked adjustments in price on that account, and recommended a resolution adopted by the Boards which stated that:

"Such adjustment in price is not in accordance with the principles of competitive bidding, such a practice will undermine and destroy the very basis of competitive bidding . . . and that this association is opposed to the award of any government construction contract at an adjusted price where such adjustment in price has been made because of a plea of error on the part of the bidder."

Actions of the association in recommending improvement in the standard government construction contract Form 23 were reported by J. C. Hayes, A.G.C. counsel, and J. M. Sprouse, committee secretary.

The committee reported substantial benefits to the government and the industry from work of A.G.C. task units meeting with the Corps of Engineers, Bureau of Yards and Docks, and Bureau of Reclamation, and that work was progressing with the Corps on review of airfield flexible pavement design and specifications and on a standard form for municipal engineering contracts.

The committee recommended that as an experiment a subcommittee be authorized with the North Pacific Division



John MacLeod, California contractor nominated for the presidency of A.G.C. by the Governing and Advisory Boards at the Chicago Mid-year Board meeting, is congratulated by current president, C. P. Street, of Charlotte, N. C. Looking on are (left to right): James D. Marshall, A.G.C.'s executive director; George C. Koss, Des Moines, Iowa, newly nominated vice president; Mr. Street and Mr. MacLeod; and H. E. Foreman, managing director of the A.G.C.

sion of the Corps of Engineers and with one of the naval districts.

Building Construction

Building contractors at their round-table meeting recommended: The establishment of more local joint cooperative committees of the American Institute of Architects and A.G.C., wider distribution among architects and owners of the jointly developed document, *A Suggested Guide to Bidding Procedure*; further study by both organizations of insurance provisions of A.I.A. standard contract forms; wider distribution of plans and specifications as enabling owners to receive more competition, and that producers of building materials and related products adopt the modular coordination method.

Chairman Frank F. Burrows, Williams & Burrows, Inc., Burlingame, Calif., reported that other subjects discussed included subcontractor relationships, work of the Building Research Advisory Board, labor relations, accident prevention, apprentice training, and work which had been done by the Building Contractors'

Division during the year under direction of W. A. Snow, manager. (More details on Page 39.)

Highway Construction

The highway contractors' round-table meeting noted that through greater public understanding of highway needs more state and local governments were providing more adequate financing for construction programs, Chairman P. M. Thornton, Thornton Construction Co., Hancock, Mich., reported, giving encouragement for increased financing on national, state and local levels.

In its discussions the group recommended: that specifications for toll roads compare favorably to those for regular highway programs; that more states and communities take advantage of the economics of performing maintenance by contract; more attention be paid to accident prevention activities by contractors. Other subjects discussed included cooperation with the American Association of State Highway Officials and state highway departments; cooperation with the American Society of Civil Engineers; labor

MacLeod and Koss Nominated by A.G.C. Boards

• Heavy and Highway Contractors Picked for Highest Posts



Mr. John MacLeod

» JOHN MACLEOD, vice-president of A.G.C., was nominated for president in 1954 by the Governing and Advisory Boards of the association at their mid-year meeting in Chicago. George C. Koss, of Des Moines, received the vice-presidential nomination.

Mr. MacLeod, who was born in Scotland in 1893, has been president of the Macco Corporation, of Paramount, Calif., since 1929. He is noted as a builder of dams, Army and Navy ordnance test stations, air bases, supply depots for armed forces, amphibious installations and industrial facilities, particularly for the oil industry.

The A.G.C. vice-president's committee posts in the association have been many. He was president of the Southern California Chapter in 1941 and headed the Heavy Construction and Railroad Contractors' Division in 1950. He has served as chairman of the Public Relations Committee; member of the Labor and Progress committees; a director, and a member of the Bureau of Yards and Docks Specifications Task Unit.

He is currently a member of the Executive, Finance and Adjustment committees and is an A.G.C. representative on the Construction Industry Manufacturers Association-A.G.C. Joint Cooperative Committee.

Mr. Koss, the nominee for vice-president, has been active in construction work since 1929. He is head of the Koss Construction Co., a prominent



Mr. George C. Koss

Iowa highway and airport contracting firm which is one of the largest concrete pavers in the country. A number of major air bases were built in the Midwest during World War II by Mr. Koss's firm.

Mr. Koss attended Phillips Exeter Academy and Harvard University. The Iowa contractor's vigorous participation in civic and community affairs, notably on behalf of the American Red Cross and Community Chest, and in cultural and educational fields, gained for him last year the *Des Moines Tribune's* award as the city's "most public-spirited citizen of 1952."

Chairman of the Public Relations Committee, a member of the Executive Committee and a national director, Mr. Koss also serves on the joint cooperative committee of the A.G.C. and American Association of State Highway Officials, the C.I.M.A.-A.G.C. committee and the Contract Forms and Specifications Committee.

Mr. Koss was chairman of the A.G.C. Highway Contractors' Division in 1948 and is a former chairman of the Airway Facilities Committee. Other posts he has held were on the Adjustment, Ethics and Trade Practices, and Progress committees.

Nominations for state directors, which closed Sept. 15, will be announced after ballots have been canvassed and tabulated. Election of officers and directors will be by mail ballot in December. They will be installed at the next convention.

(Continued from Page 25)

relations; transportation of contractors' equipment between projects; working time allowed the contractor; and handling of detour traffic.

Division manager A. N. Carter reported on activities of the division and forecast a decline in airport work but an increase in the volume of rural electrification and telephone work. (More details on Page 45.)

Heavy Construction

Millions of dollars have been saved for contractors and the government through work of the task units which A.G.C. maintains to consult with federal agencies on specifications and other construction problems. C. W. Cunningham, Condon-Cunningham Co., Omaha, stated in reporting on discussions at the heavy construction and railroad contractors' meeting.

Progress reports were made by the Corps of Engineers unit, headed by J. A. Henderson, United Construction Co., Winona, Minn., Bureau of Reclamation unit, headed by Wm. H. DeButts, C. F. Lytle Co., Sioux City, and special unit on flexible pavement specifications, headed by N. K. Dickerson, Jr., Dickerson, Inc., Monroe, N. C.

Division Manager J. M. Sprouse reported on division actions during the year. (Further details on Page 42.)

Accident Prevention

Continued progress in developing safety programs for the national association and chapters which are becoming more effective in helping contractors to prevent accidents on their projects was reported by H. B. Alexander, H. B. Alexander & Son, Inc., Harrisburg, chairman of the Accident Prevention Committee.

Two days of meetings were held prior to the Board meeting by the committee with liaison groups of the A.G.C. Secretaries' and Managers' Council and the Associations of Casualty Insurers. H. J. Kirk, manager of safety for the A.G.C. staff, outlined association actions.

The committee's work was climaxed by presentation to the Boards of a panel emphasizing "The Place of Accident Prevention in Construction," headed by Ira S. Hardin, Atlanta, committee vice chairman. (Further details on Page 57.)

Apprentice Training

A warning that an insufficient number of young men are being attracted

into apprenticeship programs and a plea for greater contractor participation in training programs were made by F. G. Krapf, Wilmington, Del., chairman of the Apprentice Training Committee. The committee approved revisions in carpenters' and cement masons' national standards, and presented a motion picture made by the U. S. Bureau of Apprenticeship with the cooperation of A.G.C. and others.

Governing Provisions

A general review of the association's bylaws and rules of procedure is being made by the Governing Provisions Committee with a view to correcting any conflicts and to make them more useful, Past President M. W. Watson, Topeka, Kans. reported. He explained that because the review probably cannot be completed by time of the next annual convention, a recommendation may be made that the Boards be authorized to approve revisions at the next Mid-Year meeting.

Public Relations

The public relations activities of the association have served to make all A.G.C. actions more effective, and to bring about greater public knowledge and understanding of the construction industry, the contract method, and the skill, integrity and responsibility of A.G.C. members, Chairman George C. Koss of the Public Relations Committee reported.

The committee met with a liaison group of the Secretaries' and Managers' Council to continue discussion of means of providing greater assistance to chapters in developing or expanding public relations programs.

The association's program of publication of the *National News-Letter*, *THE CONSTRUCTOR*, numerous documents as required, a small program of paid advertising, dissemination of information, and the start of educational programs was outlined by Manager Wm. E. Woodruff and Assistant Manager Wm. G. Dooley, and approved by the committee.

The opportunities provided by the present day education system for the association to provide accurate and unbiased information about the industry to teachers for classroom use were explored, and the committee recommended continued study of the proper preparation of the required material.

Secretaries' and Managers' Council

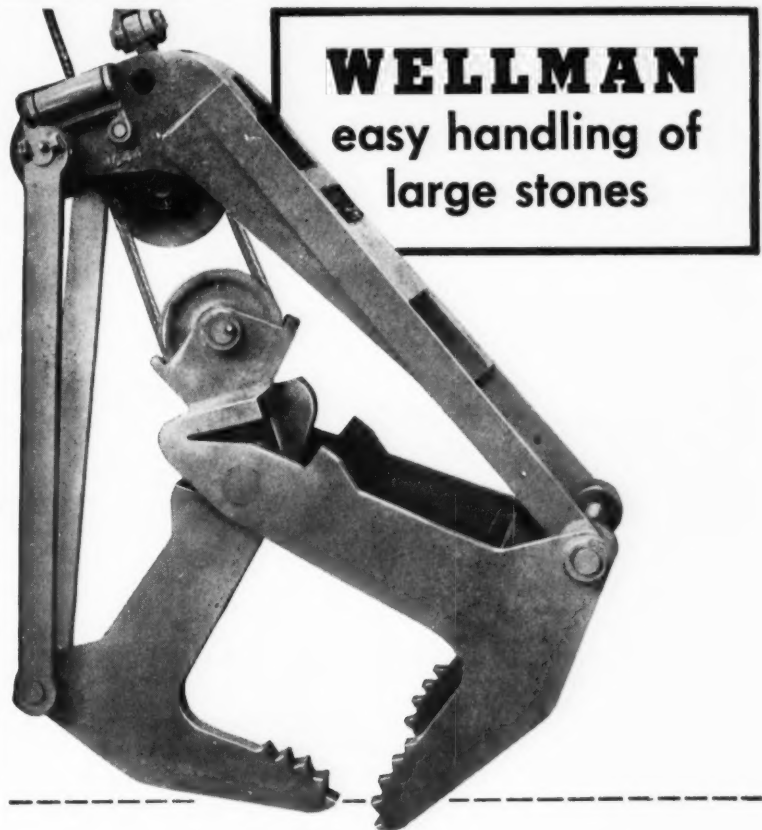
The A.G.C. Secretaries' and Managers' Council held its customary

morning session on September 13 to hear talks by national officers and to discuss general problems of chapter management. Chairman Robert Paten, of the Carolinas Branch, presided and later made the Council's report to the Boards.

Separate discussions were held in the afternoon for managers of building chapters, at which Vice Chairman William C. Bowden, Master Builders Association of Allegheny County,

Penn., presided; and for managers of highway and heavy chapters, at which Vice Chairman A. H. Harding, Portland Chapter, presided. Curtis Bell, South Texas Chapter, is secretary.

The Board sessions were preceded on September 13 by a reception at which the Chicago Builders' Chapter was host. President of the chapter is David B. Johnson, Chas. B. Johnson & Son, and secretary is H. Mayne Stanton.



- Those big stones won't slip from the Wellman Stone Grab. Four-part closing cable reeving develops tremendous closing force on stones. Model shown has 5-ton capacity, 4½ foot jaw spread. Other capacities available.

Want Facts? Send for free descriptive bulletins.

THE WELLMAN ENGINEERING COMPANY

7000 CENTRAL AVENUE • CLEVELAND 4, OHIO

STONE AND WOOD GRABS • CLAMSHELL, DRAGLINE, CUSTOM-BUILT BUCKETS

GM DIESEL
CASE HISTORY No. IC9-85

OWNER: Rose Construction Co.,
Atlanta, Georgia

INSTALLATION: GM 2-71 Diesel,
replacing a gasoline
engine in $\frac{1}{2}$ -yd. backhoe.

PERFORMANCE: Shovel now works
faster, maintains the
load and doesn't stall.
Previous engine was burning
35 gallons of gasoline in
8-hour day; GM Diesel
uses only 6 to 8 gallons
of Diesel fuel per day.



It pays to STANDARDIZE on



SWITCH FROM GASOLINE TO GM DIESEL SLASHES FUEL COST

You can see from the above that it won't take long for this General Motors Diesel to pay for itself out of fuel savings alone. Add the extra work it does every day—the lower cost of maintenance—increased equipment availability—longer engine life—and you'll see why buying a GM Diesel is one of the best investments you can make.

The GM Diesel starts at the push of a button—uses fuel in direct proportion to the work it does. It gets work done faster because with 2-cycle

operation it accelerates faster under load changes. And because of its smaller size, it often fits where other Diesels won't.

If you have equipment that needs new life, contact your GM Diesel distributor. He will analyze your power requirements and show you in dollars and cents how much this engine can save for you. No obligation, of course.

DETROIT DIESEL ENGINE DIVISION

GENERAL MOTORS • DETROIT 28, MICHIGAN
Single Engines... 16 to 275 H.P. Multiple Units... Up to 840 H.P.

» **PRESIDENT** Eisenhower will send his suggestions for correcting "defects" in the Labor-Management Relations Act to Congress when it reconvenes in January.

This announcement was made to the American Federation of Labor convention in St. Louis last month in a message read by Vice President Richard Nixon. In discussing the act, the President stated:

"I frankly repeat the estimate of the Taft-Hartley Act which I have stated often in the past. And even though the past six years have revealed a number of defects which should be corrected, I believe that its enactment was a substantial contribution to the quest for sounder labor-management relations. I believe that the experience under the act has confirmed its essential soundness.

"These defects have been under critical study by this Administration. The objectives of this study have been and continue to be these:

"1. To remedy defects which cause concern on the part of working men and women over possible results or uses of the act to their detriment.

"2. To insure administration of the act in the manner that is efficient, speedy, and impartial.

"3. To allow freedom for the healthy growth of trade unions, while respecting the rights of individual workers, their employers and the general public.

"4. To work to the end that there be less rather than more government interference in labor-management affairs."

The President gave no details of his future recommendations. He stated that an informal committee of executive officials and Congressional leaders will report their recommendations for amendment of the act to him later in the year.

Unofficial Amendments by Labor

Prior to the resignation of Secretary of Labor Martin Durkin last month there had been published an unofficial "preliminary draft" of proposals for amending the act, reported to be prepared for transmittal to Congress. A number of the proposals were along lines of those sought by labor leaders.

No information is available on whether or not any of these proposals will be included in the message to Congress next January, but five of them would have had a direct effect on the construction industry and the balance of the 19 would have had an

Eisenhower Ready to Report Suggestions on Taft-Hartley

- **Nixon Tells A.F.L. of President's Conclusions**
- **Durkin's Provisions for Construction Revealed**

indirect effect. Text of those of direct interest to construction follows:

Hiring Hall Recommendation

"6. Under the present act, there may be some question as to whether an employer may notify a union that job opportunities exist in his plant, or give the union a reasonable opportunity to refer qualified applicants for employment. I recommend that the law be amended to make it clear that these things can be done."

Clarify Training Requirements

"7. I recommend that the act be amended so as to make it clear that an employer and a union may enter into an agreement specifying the minimum training or experience qualification that will be required for employment or respecting priority in opportunities for employment based upon the experience of the employee, and also specifying in the event a union shop contract is in effect an individual, meeting such qualifications, shall be admitted to the union on the same terms and conditions generally applicable to other members. Such an amendment should also make it clear, however, that no discrimination on the basis of membership or non-membership in a union would thereby become lawful if otherwise unlawful under the act."

Construction Industry Provisions

"8. Neither the provisions of the original National Labor Relations Act, nor the provisions of the Labor-Management Relations Act of 1947, are suited to the construction, amusement, and maritime industries or other industries in which employment is primarily casual, temporary, or intermittent, or where it is impractical to hold an election in accordance with the act. In these industries the tenure of employment of any particular group of employees is usually not sufficiently long enough to permit the holding of an election for the purpose of determining the employees' representative for collective bargaining. Similarly, if a union shop contract is in effect, the

employees' job frequently comes to an end before the expiration of the thirty-day period within which he must join the union under the contract. Hence, in these industries the rights of individual working men and women to bargain collectively through representatives of their choosing do not receive adequate protection.

"I recommend that in these industries the employer be permitted to enter into pre-hire contracts with unions, under which the particular union involved is treated as the employees' representative for collective bargaining. I also recommend, in the interest of union security in these industries, the pre-hire contracts be permitted to contain a 'union shop' provision under which the individuals hired may be required to join the union within seven, instead of thirty days after beginning of employment."

Secondary Boycotts Amendment

"9. In the matter of the so-called secondary boycotts, the act requires substantive amendment in one respect and clarification in other respects.

"The act as written prohibits as a secondary boycott concerted activities on a construction project that have heretofore generally been regarded as legitimate and justifiable. In these projects, all contractors are, in reality, engaged in a common undertaking at the project's site and should be recognized as one, integrated unit, for the purpose of applying the secondary boycott provisions; but under the present law this cannot be done. I recommend that the act be amended to exclude from the classification of prohibited boycotts concerted activities on a construction project.

"In addition to amendment of the act in this manner, the act requires clarification in its application to so-called primary situs activities and to 'farmed-out' work.

"The act has been interpreted to permit activities reasonably and clearly directed toward an employer with whom a labor dispute exists, wherever his employees are engaged in normal business operations, as primary situs

Contractor Committee Takes Stand on Wages

• A.G.C. Labor Unit Asks Fairer Administration of Davis-Bacon

» THE A.G.C. Labor Committee, with a record attendance of 23 members, held a day-long session prior to the association's Mid-Year Board Meeting to consider an agenda of nine subjects embracing 20 items. The following resolution, recommended by the committee, was adopted by the Boards:

"The Associated General Contractors of America, for the best interests of the construction industry and the public, vigorously resists any further

increase in wages or fringe benefits."

There was considerable discussion of dissatisfaction in the administration of the Davis-Bacon Act by which the U. S. Department of Labor predetermines wage rates and working conditions prevailing in areas where federal projects are to be initiated and supervises enforcement.

Conference with Labor Urged

A recommendation was adopted by the boards that the national staff be instructed, with advice and counsel of the committee, to confer with the new Secretary of Labor, when appointed, "and express to him the objections of this association to the manner in which the Davis-Bacon Act has been administered in the past, and to request that steps be taken to insure an impartial administration of this act in the future."

Roundtable discussion meetings of building, highway, and heavy construction contractors all recommended that legislation be sought, if necessary, to permit court review of the Labor Department's quasi-judicial actions in administering the act.

Consider Loss of Markets

Losses of construction markets by pressures of industrial unions or other unions not members of the A.F.L.

Building and Construction Trades Department was thoroughly considered.

Continued discussions were authorized with union officials for the purpose of exchange of information on developments affecting the construction market; to remedy situations where general contractors are prevented from doing work because of conflicting demands of building trades and industrial unions; and to provide means for solution of other major problems affecting the industry.

Developments in continuation of the National Joint Board for the Settlement of Jurisdictional Disputes were reviewed. John T. Dunlop, chairman of the board, was a luncheon guest of the committee.

I.L.O. Representatives Called

Report was made that A.G.C. Past President M. W. Watson, Topeka, Kans., and Lester C. Rogers, former committee chairman, had accepted appointment as industry representatives to meetings of the Building, Civil Engineering and Public Works Committee of the International Labor Organization to be held October 16 to November 7 in Geneva, Switzerland.

Reports of the committee were made by Chairman Arthur H. Wells, Chicago. William E. Dunn, manager, Labor Relations, and Edward T. Kelly, Labor Service Advisor, led discussions on labor matters at division roundtable discussions and at meetings of the A.G.C. Secretaries' and Managers' Council.

EISENHOWER (Continued)

activities. Also the act has been applied to permit concerted activities directed at work which is being 'farmed out' to other employers while employees who normally perform the work are on strike. These interpretations should be clarified and affirmed by appropriate amendment."

State Jurisdictional Limits

"17. The present act contains two provisions which appear to be based upon opposite and mutually exclusive theories. One of these provisions relates to state laws regarding the so-called 'closed shop', and the other relates to the federal treatment or supervises to the exclusion of the states.

"Moreover, wholly apart from these two conflicting statutory rules, there has been developed under the act a confusion as to where federal jurisdiction ends and state jurisdiction begins.

Suggests General Rule

"I recommend that the two statutory provisions referred to be eliminated, and that in their place there be included a general rule fixing the dividing line between federal and state jurisdiction. Such a rule should recognize the paramount authority of the federal law in the interest of uniformity throughout the United States. It should also, however, save to the states their right to preserve public order within their boundaries, and also recognize the right of any state in the absence of federal action under the national emergency provisions of the act, to protect the health or safety of the state during any labor dispute which the governor finds creates a state emergency."

Recent Labor Cases Affecting Construction

William E. Dunn

Manager, Labor Relations

NLRB Reviewing Some Policy Decisions

» WITH the newly appointed NLRB Chairman Guy Farmer and Board member Philip Ray Rodgers now actively participating in NLRB hearings, some interesting developments have been noted. As yet the President has not appointed anyone to fill the remaining vacancy on the NLRB which was created on the resignation of Paul L. Styles on September 1. Therefore, the Board is presently constituted of two Eisenhower and two Truman appointees. Observers of Washington administrative practices and trends have noted that the dissents of Chairman Farmer may well presage the

future policy of the NLRB when the Board gets into full swing with all five members participating.

Mr. Farmer's first publicly announced dissent sharply disagreed with the NLRB majority, as it existed on August 26, 1953, on the legal effect of electioneering by a union which used a sound truck to influence the results of a representation election. The majority had held that the use of a sound truck during a representation election did not constitute improper interferences because the electioneering conducted over the sound truck was "for a relatively short period of time." Both Chairman Farmer and NLRB member Abe Murdock would have set aside an election won by Local 37 of

the A. F. of L.'s Boilermakers Union at Higgins, Inc., New Orleans, plant on the ground that the use of a sound truck prior to an election violated the NLRB rule that electioneering is not permitted at or near the polling place. (15-RC-886)

In his second dissent, also issued August 26, Chairman Farmer disagreed with the majority claiming that authorization cards do not constitute sufficient evidence to establish the union status as representative of the majority of the employees in the face of the union's loss of an election. The majority had held that cards signed by employees authorizing the union to represent them established the union's majority even though the union later lost an election ordered by the Board. Board member Abe Murdock did not participate in the decision which was made prior to the appointment of Mr. Rodgers.

Stand on Membership Cards

Farmer took a similar position in a refusal to bargain case where the majority of the NLRB held that membership cards were ample proof of a union majority. Farmer said: "As proof of its majority representation the union offered in evidence signed authorization cards. But such cards are an 'unreliable method of determining majority status of a union. . . . Because of this fact and the ready availability of the Board's election machinery to determine the majority issue, the Board has turned more and more to the use of the secret ballot as the most conclusive and satisfactory method for determining whether or not a union's claim to majority status is well-founded. In this case, the union and the employer agreed to a consent election, thus evidencing their desire to have the issue of the union's majority status decided at the polls. The election was never held because of the shut-down of the plant, and consequently, in my view, the union never properly established its right to represent the Charlotte employees. Since a finding of exclusive representation rights is a statutory prerequisite to a finding of refusal to bargain, I see no basis for finding a violation of Section 8 (a) (5)." (Brown Truck and Trailer Mfg. Co., Inc., et al., 11-CA-500)

Jurisdiction over Small Employers

On the same day Farmer also disagreed with the majority on the issue of NLRB jurisdiction over small em-

ployers. He said "I would not assert jurisdiction over this small employer. Without purporting to be able to state with complete assurance whether or not the broad sweep of the Board's jurisdiction under the statute extends so far as to reach this small local business man. I would not, as a matter of administrative self-restraint, exercise the authority which we may have over his employer-employee relationships.

"The respondent is a small automobile and truck distributor and garage owner who employs at most two garage mechanics and who, with the aid of his wife, manages and works in his own garage. He imports about \$62,000 worth of motor vehicles and accessories annually and sells them in and around the little town of West Bend, Wisconsin, where his business is located. He has a franchise arrangement with General Motors Corporation.

"This small business is an essential part of the operations of General Motors Corporation in precisely the same respect and roughly to the same degree as a single drop of salt water is an essential ingredient of the Pacific Ocean." (Klinka's Garage, 106 NLRB No. 156)

NLRB Policy Reversed on Guards

One of the first clear cut reversals of "old" NLRB policies is contained in the recent Armored Motor Service Company Case (32-RC-656) which held that the term "guard" as used in the Taft-Hartley Act is not limited to those employees who protect the property of their own employer but also includes employees of companies furnishing guard services to other employers. The reconstituted Board said that it did not believe Congress intended to limit the prohibitions of Section 9 (b) (3) of the Taft-Hartley Act to plant guards. This section of the act reads in part: "That the board shall not . . . decide that any unit is appropriate for such purpose if it includes, together with other employees, any individual employed as a guard to enforce against employees and other persons rules to protect property of the employer or to protect the safety of persons on the employer's premises; but no labor organization shall be certified as the representative of employees in a bargaining unit of guards if such organization admits to membership, or is affiliated directly or indirectly with an organization which admits to membership employees other than guards.

New Back Pay Policy

Another important reversal came on September 25 when Chairman Farmer and members Rodgers and Peterson concur in a ruling which holds that an employee must make reasonable efforts to find other employment before the NLRB will order back pay covering a period between layoff and reinstatement. The new policy calls for more vigor, initiative and industry on the part of the employee. The Board said in part: "Although she may have been warranted in not reapplying for the hospital job because of her lack of training for that work, no reason appears either for her failure to make additional applications at the laundry or telephone company or her failure during the entire time that she was unemployed to make applications elsewhere." The employee, a discharged garment worker, made only 6 applications for work over a period of 46 months yet the "old" Board last March awarded the employee back pay amounting to \$2595.86 because of an illegal discharge January 3, 1948. (NLRB Case 16-CA-39, September 25, 1953)

60-Day Notice Issue

The latest subject to come under the scrutiny of the reconstituted NLRB is Section 8 (d) the 60-day notice provision of the Taft-Hartley Act. The "old" Board had held in the celebrated Wilson and Co. Case (89 NLRB 310, April, 1950) that a union could strike during the life of a labor agreement even though it failed to give the 60-day notice. This decision was widely criticized at the time and was cited as a prime example of attempts to repeal the Act by decisional attrition. Today employers and unions alike await with interest the outcome of the pending Lion Oil Co. Case, on which oral argument was had on September 24, 1953, and which case involves some of the same issues which were present in the Wilson Co. Case.

Richard J. Gray, president, Building and Construction Trades Department, A.F.L., and Maurice A. Hutcheson, president, United Brotherhood of Carpenters and Joiners, held a 30-minute conference, Oct. 1, with President Eisenhower to urge his support of amendments to the Taft-Hartley Act of interest to building trades unions. The amendments related to union contracts before hiring, secondary boycotts, state laws and right of employers to assign workmen.

Bills are Detrimental to the Public Interest

• A.G.C. Boards Reveal Faults in Proposed Legislation

The Governing and Advisory Boards of The Associated General Contractors of America at their Mid-Year Meeting in September again considered the proposed "Federal Construction Contract Act of 1953" (S. 848 and H.R. 1825) and found it contrary to the public interest. The following statement outlines their views.

The "Federal Construction Contract Act of 1953" is proposed legislation of such complexity that its full implications can scarcely be understood by persons not actively engaged in the construction industry.

The bills before the 83rd Congress, S. 848 and H. R. 1825, would not accomplish the claimed objectives of:

1. Establishing a more efficient system for the bidding and award of subcontracts on federal public works projects.
2. Encouraging more economical construction.
3. Stimulating more competition for subcontracts.
4. Improving the ethics of business practices.

When thoroughly analyzed, the bills are detrimental to the public interest in that they would:

1. Establish an excessively complicated and unworkable system for the bidding and award of subcontracts on federal public works.
2. Increase the cost of construction.
3. Lessen the competition for subcontracts under the guise of legality.
4. Create surreptitious business relationships in the construction industry.

Guaranteed Performance

Under the present system of awarding contracts for the construction of public works projects, general contractors in open competition submit sealed bids to the federal agencies. Each bid is accompanied by a bond in the form of corporate surety or U. S. Government bonds, by which each general contractor guarantees:

1. That he will accept the contract if found to be the lowest responsible bidder, and will supply full completion and payment bonds.

2. That he will complete all of the work at the contract price and time specified in full accord with the plans and specifications—whether he makes a profit or suffers a loss.

3. That all workmen, materials suppliers, subcontractors and others will be paid in full.

In submitting his bid, each general contractor agrees to assume the complete responsibility for the satisfactory completion of the entire project, including mechanical specialty work, and guarantees to do it at his bid price.

After the bids have been opened and evaluated by the government agency, award of the contract is made to the lowest responsible bidder. The contract is then signed by the government and the general contractor, who thereby assumes all financial obligations for execution of the project.

Experience through the years has demonstrated that under this free competitive system the government receives maximum value for its investment in construction.

Proposal Is Detrimental

The proposed legislation is detrimental to the public interest because it would substitute for the present system an excessively complex and unworkable method for the bidding and awarding of subcontracts for mechanical specialty work which would seriously hamper general contractors in discharging their responsibilities to the government.

At the time when general contractors submit their guaranteed bids to the government they have only offers from subcontractors. Not until after the award has been made to the lowest responsible bidder can he obtain a contract from a subcontractor and se-

cure a guaranteed price and performance.

The practical effect of the proposed legislation is to place artificial restrictions upon general contractors in the proper selection of subcontractors best qualified and willing to perform the mechanical specialty work. This is detrimental to the public interest because it will force general contractors to protect themselves by submitting higher bids, thereby increasing costs to the government.

Further harmful effects of the legislation are outlined below.

Proposed Method Unworkable

Section 3 of the proposed legislation provides that the general contractor, in his lump sum bid on a federal public works project, shall name the subcontractors he proposes for the mechanical specialty work and the amounts of their offers to him.

A substitute subcontractor must be employed if the one named proves to be unqualified. He cannot be chosen in the free market but must be some other subcontractor named by one of the other general contractors. If the substitute's offer is lower than the original, the net difference is to be refunded to the government. If higher, no payment to the general contractor is proposed.

In actual practice, the provisions of the legislation would establish an unworkable system. Normally subcontractors submit their *unguaranteed* offers at the last moment before the general contractor must submit his bid, *guaranteed* and bonded. The general contractor has little or no time to analyze the offers to determine if they are complete, if the subcontractor is qualified for the particular work, or has sufficient organization available in time to fit the construction schedule.

The proposed legislation would not remedy these late offers of the subcontractor nor make it possible for general contractors to fully analyze subcontractor offers before submitting their guaranteed bids.

On government contracts the general contractor frequently is required to submit a number of alternates to his base bid to meet the possible variations in the requirements. After the general contract bids have been opened

and analyzed, the government may select any number of the alternate items. On the alternates the general contractor will receive varying offers from his subcontractors. Any one of several subcontractors would have submitted the low offer depending upon which combination of alternates the government finally selected. This would make it impossible for the general contractor at the time of submitting his bid to know which of his subcontractors would be low and which one he should name, and what price.

An unworkable law is not in the public interest.

Increased Costs

The effects of these provisions would be to increase the cost of construction to the government.

The legislation, by requiring the general contractor to name his proposed subcontractors in advance and the amounts of their unguaranteed offers, would force the general contractor to guarantee the performance of a subcontractor before he had the opportunity to secure assurance that the subcontractor could and would do all work required for the offered price and in the required time without costly delays to the other work.

Under such circumstances competent general contractors would feel compelled to name subcontractors whose offers were higher than the lowest price received in order to protect themselves against unknown contingencies. Such uncertainty results in higher costs to the government.

Reduce Competition

Another effect of the proposed legislation would be to reduce the competition among subcontractors, and to work a hardship on smaller and growing subcontractor organizations.

Without proper time to fully analyze subcontractor offers, general contractors would feel it necessary to name the larger and better known subcontractors. Not having the opportunity to fully investigate the competence of lesser known and frequently local subcontractors, general contractors would be reluctant to gamble in advance on guaranteeing subcontractor performance.

The provision that a substitute sub-

contractor must be one named by one of the other general contractors in the bidding would make for a condition which could encourage curtailment of competition for subcontracts and help to protect any collusive bidding arrangement which might be used by subcontractors.

The best interests of the government are served when there is free and open competition in all operations of the construction industry.

Cost-Plus-A-Fixed-Fee Contracts

Section 2 of the proposed legislation provides that mechanical specialty work under a cost-plus-a-fixed-fee contract shall be "done by independent mechanical specialty subcontractors or by a contractor qualified to perform such mechanical specialty work."

This proposal is unnecessary. Government agencies already have ample authority under such contracts to disapprove those not qualified. Only exceptional projects are executed under this type of contract.

The policy of most general contractors is to subcontract the mechanical specialty work for which they are not specially qualified. It is to their own advantage to do so to hold down management costs for which they are not reimbursed under a fee contract.

Government Agencies

The proposed legislation would bring about added administrative and legal responsibilities for federal agencies. They would be obliged to assume responsibilities toward subcontractors which they do not now have. They would be faced with the possibility of many protests from unsuccessful bidders with reference to contract awards because of the extreme complexity of the bidding and awarding procedure inherent in the proposed legislation.

It would require policing by some agency or agencies, not identified in the bills, because fines up to \$5,000 are provided for general contractors who would violate the law. No fines are provided for subcontractors.

Government agencies have been unanimous in opposing the legislation.

Industry Ethics

The proposed legislation would not

be effective in preventing bid shopping by general contractors or bid peddling by mechanical specialty contractors, or in improving ethics of the industry.

It is a simple matter, as happens in Massachusetts where there is a law similar to the proposed federal legislation, for a subcontractor to submit his offer to the general contractor and then confidentially and surreptitiously advise him that he will pay such charges for transporting his materials on the site, or for other real or fictitious services, as may be necessary to make his net price the lowest.

The most practical guide yet established for fair dealings in the construction industry is the Code of Ethical Conduct of The Associated General Contractors of America.

The vast majority of general contractors and mechanical specialty and other subcontractors do conduct their business relationships in an ethical manner. Actions by responsible groups in the construction industry to develop new codes or make old ones more universally understood can do more than legislation can to improve the ethics of business relationships.

Summary

The proposed "Federal Construction Contract Act of 1953," before Congress in S. 848 and H. R. 1825, is exceedingly complex legislation which is detrimental to the public interest because:

1. It would establish an unworkable method for the bidding and award of subcontracts which would endanger the present system of contracting by which the government secures the maximum value for its investment in federal public works projects.
2. It would increase the cost of construction to the government.
3. It would encourage the weakening of competition for subcontracts.
4. It would increase the legal and administrative responsibilities of government agencies.
5. It would not be effective in regulating business ethics, which can be improved only by voluntary action of the various groups in the construction industry.
6. It would set a bad example to states, municipalities and private industry by limiting free competition.

HOW TO HANDLE WET JOBS

#21 of a Series

EARTH EMBANKMENT FOR RAILROAD

Matawan, N. J.

Contractor: J. Rich Steers, Inc.



WELLPOINTS SPEED CONSOLIDATION OF MARSH

THE ABOVE trestle, spanning Matawan Creek and adjoining marshes, was being replaced by an earth embankment (creek carried through by culvert). While placing the fill, the following problem arose:

- The underlying marsh soil—predominantly silt—was highly unstable, and progress in raising the fill went at snail's pace. Any attempt to hasten the surcharge meant threat of shear failures, thus imperilling trestle.
- Certainly no simple problem, yet it was quickly and dependably solved with a Griffin Wellpoint system (See photo, center). Used together with vertical drains, the wellpoints, penetrating to a depth of about 50 ft, greatly accelerated consolidation of the soft soil.
- When you meet with an out-of-the-ordinary wet job, it will pay you to meet with Griffin engineers.



WELLPOINT CORP.

881 East 141st Street, New York 54, N. Y.
Hammond, Ind. Houston, Tex. Jacksonville, Fla.

In Canada: Construction Equipment Co., Ltd.
Toronto Montreal Halifax

APPRENTICE TRAINING

Apprenticeship Group Backs Training Film

• Plan Announced to Develop Information Booklets for Trainees

» THE Apprenticeship Committee of The Associated General Contractors of America showed a documentary film on training bricklayers to the board meeting at Chicago to promote its use by A.G.C. officials and groups in securing more apprentices in the building trades.

Entitled a "Future for American Youth Through Apprenticeship," the film was produced by the State Department, for overseas information use originally, with the aid of the Bureau of Apprenticeship, the A.G.C. and other industry segments.

It is now available to private groups and training officials at the bureau's regional offices. The Apprenticeship Committee is encouraging its use by chapter officials and joint apprenticeship committees to acquaint potential trainees with the values of careers in construction trades.

To carry this general program out further, Committee Secretary Welton A. Snow told the committee that the national office is developing information booklets and literature that can be distributed free to those interested in becoming apprentices in the building trades, or to vocational advisers who must be familiar with job opportunities in the industry.

Expected to be included in the literature are the carpentry, bricklaying, masonry and painting trades, Mr. Snow said.

He also told the group that the question has arisen recently on whether or not local joint apprenticeship committees have the power to discharge apprentices for failing to conform to the terms of the apprenticeship agreement, and not violate the Taft-Hartley Law at the same time.

A former Labor Department solicitor last year, after studying a certain California case dismissed by the National Labor Relations Board, said that joint committee members can fulfill their responsibilities described in the training standards without "undue involvement." Mr. Snow added that Apprenticeship Director Patterson has been asked to get an "administrative opinion" from the NLRB on the matter.

Mr. Snow also discussed: points of interest coming out of the Chicago A.G.C. executives conference in June;

the current progress in establishing local joint committees with the iron workers; the current difficulties in expanding or developing more apprenticeship training; job opportunities in the industry; and the association's participation in local joint apprenticeship committees.

Apprenticeship Promotion

Chairman Krapf presented to the meeting a detailed plan to interest more young men in becoming apprentices. Salient points included a general promotional campaign, with pamphlets and the cooperation of the U. S. Office of Education, which would stress vocational guidance in an attempt to interest more young men to enter the construction industry.

Mr. Krapf stressed the higher wages paid to journeymen than are paid to production workers in manufacturing and the opportunities for advancing from journeyman to foreman, superintendent and even to becoming a contractor.

The A.G.C., he added, should help establish more apprenticeship contests in construction trades and publicize the contests already held by the bricklayers, electricians and painters. This way, young men will become familiar with the training programs and be more inclined to take part in them, he said.

Mr. Krapf submitted another report to the meeting in which he outlined a plan for the national office and the Apprenticeship Committee to give more service to chapters in their apprenticeship programs. He outlined present weaknesses in some of the local joint committees and what the national committee should do to improve the situation.

Also discussed at the meeting were the revised editions of the carpenters' and cement masons' standards which will be published soon.

Masons' Course Reviewed

William Roark, director of the mason relations department of the Structural Clay Products Institute, told the meeting that the third volume of the brickmasons' related training course, developed by S.C.P.I., will also be ready for distribution soon. The Apprenticeship Committee plans to re-

view the course at its next meeting prior to the Los Angeles convention in March. Members felt that more material of this type is needed by local joint apprenticeship committees.

Committee members attending the meeting included Chairman Krapf, Wilmington, Del.; Frank F. Burrows, Williams and Burrows, Inc., Burlingame, Calif.; John Cassidy, Seth E. Gien and Associates, Memphis; D. H. Cowdin, Cowdin Brothers, Dallas; Fred Fisher, Fisher Construction Co., Houston; H. D. Humphries, Concrete Builders, Inc., and Mr. Snow.

Guests included Mr. Patterson, Mr. Roark; W. W. MacLaughlin, Memphis; Cecil L. Utterback, regional director of the Bureau of Apprenticeship office in Chicago; and John K. Bowersox, assistant manager, Building Division, Washington, D. C.

Southern States Conference

The current rapid expansion of Southern industry is dependent on the development of a skilled labor force, W. F. Patterson, director of the Apprenticeship Bureau told the Southern States Apprenticeship Conference last month.

Industry expanding in this area could not survive if there were not this constant flow of workers to fill its needs, he told delegates at the meeting in Fort Worth. This is why labor, management and government must continue to establish new apprentice training programs and refine existing ones, thus supplying the needed skilled workers and enabling them to make the best use of their abilities, he added.

Mechanization of Southern farms has made fewer agricultural workers needed, with the result that more young men are looking for employment in the construction industry, factories and the business services. He called the South the nation's No. 1 industrial frontier with its untapped markets, ample manpower and undeveloped resources.

To show the direct ratio between the industrial expansion in the South with its increased apprenticeship training, Mr. Patterson quoted the following figures: ten years ago there were 164 groups training 1,597 registered apprentices. Today there are 2,310 such groups training over 23,000 men.

It is up to groups such as the conference to see that the increased flow of apprentices into industry is continued, he added.

The Name **HOPE'S** Guarantees

Lok'd Bar FACTORY SASH

The strongest factory sash you can buy. "Lok'd Bar" design gives greater strength for its weight of metal. Stouter construction increases resistance to wear, tear and corrosion. Saving in upkeep cost, trouble-free operation and saving in heat losses more than return its small added cost to the owner.

Broad, double contacts on accurate surfaces abolish drafts, save heat. Weathering flanges have no tacked-on strips to corrode and break loose.

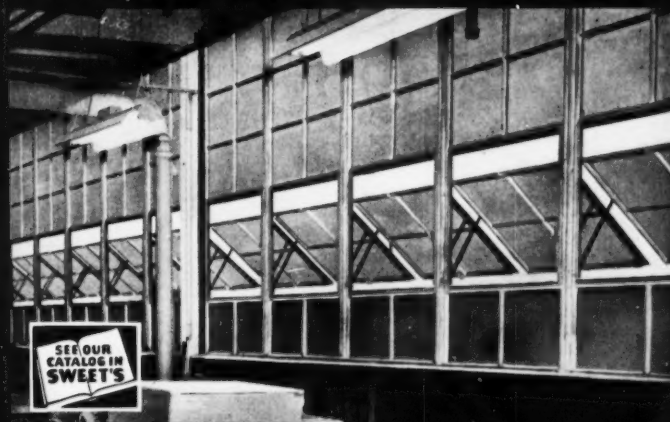
The bulb tee makes the strongest vertical sash bar.

The flat tee muntin totally replaces the steel pierced from the upright — making "Lok'd Bar" the strongest sash joint.

Corners solid-welded, each ventilator frame and casement reinforces the sash, withstands wind and shock for the life of the building.

Engineers like "Lok'd Bar's" extra safety in window walls. Builders find labor savings in installation. Look into Hope's "Lok'd Bar" sash for every good industrial building. Hope's Engineering Department will assist you with detail of window design and installation. Ask for this help!

Projected ventilator, balanced on strong steel arms with brass guides held in true position. (Pivoted ventilators are balanced on solid bronze cup pivots.)



"Lok'd Bar" means the world's finest factory sash. Ask for Catalog 103L.

HOPE'S WINDOWS, INC., Jamestown, N. Y.

The Finest Buildings throughout the World are Fitted with Hope's Windows

When construction men agree

Rarely is there such complete agreement on one make of equipment among owners, superintendents and operators as reported on these pages. Caterpillar* track-type and wheel-type Tractors, Motor Graders, Diesel Engines, Electric Sets, Scrapers and Bulldozers all share the praise of men working on the Kansas City Flood Control project.

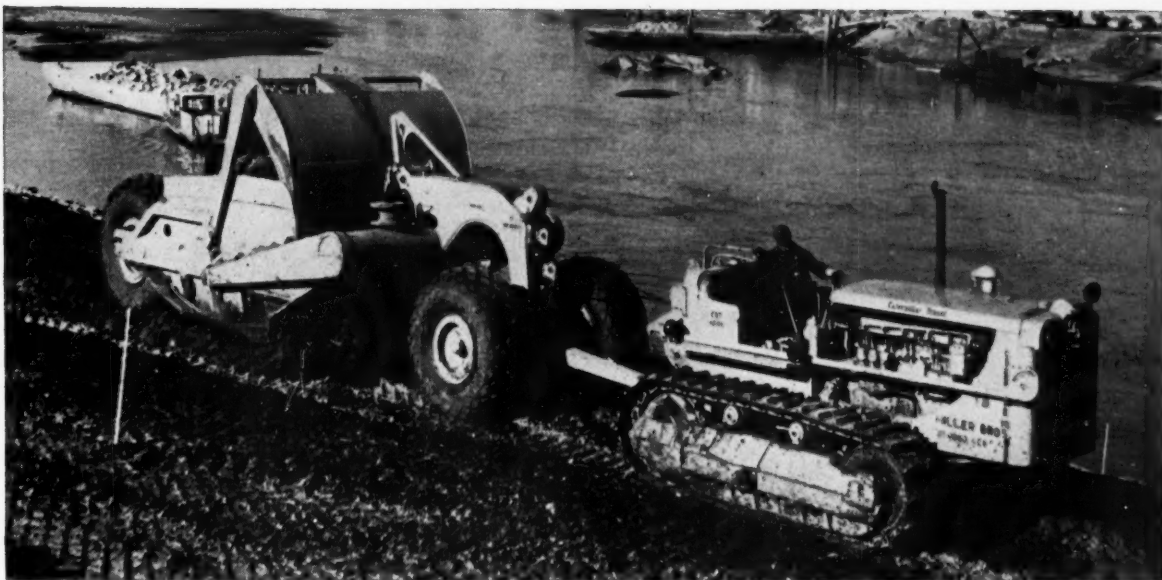


CAT* NO. 12 MOTOR GRADER does quality work in tough, sticky soil on the new levee in Kansas City, Kans. Explains M. C. Green, general superintendent of Storms & Frew Construction Co.: "We favor Cat machines because they take more abuse than other makes but still are easier to operate."



A D13000 DRIVES TOWBOAT JOHN THOMAS, owned by Massman Construction Co. The boat moves and holds in place barges with 190 tons of rock to fill tow trench in the Kaw at Turner, Kans. The operator, Alan Anderson, declared: "The D13000 has all the power I need and it's not a noisy engine. I have to live with it, so this means a lot to me."

POWERFUL CAT D337 DIESEL powers the Joy Compressor for drilling blast holes in a new quarry to obtain rock for two Kansas City levees. Rock formations include Cement City Ledge 8' deep, Raytown Limestone 8' deep, and Argentine Limestone 30' deep. Expected production: 3000 tons daily. Says J. W. Petett, superintendent for George Bennett Construction Co.: "This compressor gives us all the pressure we need to operate two drills without running itself to death."



TIGHT TURNS IN SANDY SOIL, were required of this Ds with No. 80 Scraper, owned by Miller Brothers Construction Co. Despite these tough conditions, the Caterpillar unit is making 45 to 50 round trips daily with heaping loads on a half mile haul at the Kaw's mouth. Little wonder that owner W. F. Miller says: "In the 14 years we've been operating, we have found these tractors to be our most durable and rugged machines."



DRAGLINE DRIVEN BY CAT D13000 works 16 hours a day on the project. Owned by Massman Construction, this Manitowoc 1½ yd. dragline will dig a tow trench, fill it with rock, and dress the slope on the levee with riprap. Frank W. Pitz, superintendent, said: "I think we have only one power shovel without a Cat Diesel in it. Sounds like we like them, doesn't it?"

SAFETY ON THE D7 is uppermost in the mind of Johnnie Stone, operating the tractor for Bales & Kite. Says Johnnie: "I wouldn't work on a steep bank like the ones around here with any other make of tractor." Equipped with a No. 7S Bulldozer, the D7 is 'dozing' the top of the riprap as it is dumped at the mouth of the Kaw River.



A CATERPILLAR TEAM PRODUCES for Bales & Kite at the mouth of the Kaw. The speedy DW10 with a No. 15 Scraper dumps sand where a dragline powered by a D13000 picks it up and redistributes it. It is used on the levee face to form a foundation for rock. Production: 1000 cu. yds. daily. Says co-owner M. B. Kite: "The best all-around machines are Cat machines. They have longer life, less down time and my men like to operate them better."

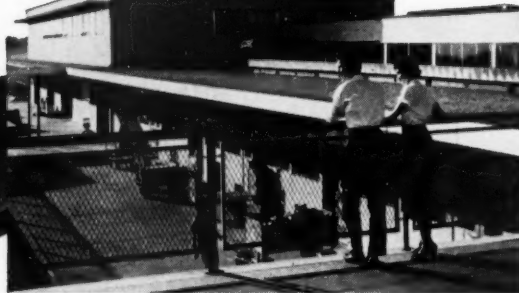
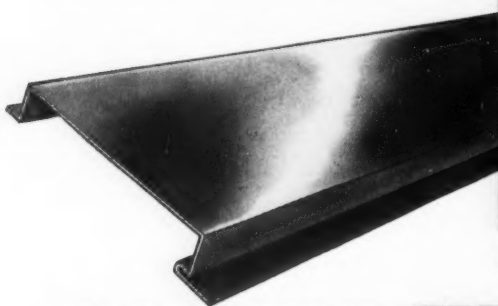
CATERPILLAR TRACTOR CO., PEORIA, ILLINOIS

*Both Cat and Caterpillar are registered trademarks—®

NEW SHREVEPORT MUNICIPAL AIRPORT



**GETS LASTING
ROOF ECONOMY**



Municipal Airport, Shreveport, La. Samuel G. Wiener, E. M. Freeman & Associates, Architects and Engineers. Built under authority of Shreveport Dept. of Public Works.

WITH TRUSCON FERROBORD® STEELDECK

This lightweight steel decking comes in units long enough to span three or more purlin spacings. Members are designed for full-length interlocking—a principle which increases carrying capacity as much as 25%. Long spans and full-length interlocking mean important first-cost savings in trusses and structural framing.

Lightweight Ferroboard is easy to handle, easy to place. Welding contacts are flat. Work is done from above. No need for scaffolding or movable stages during erection. More first-cost economies.

When laid, Ferroboard is a smooth unbroken surface, ready for insulation and built-up waterproofing. Its life expectancy is long. We'll arrange a worthwhile demonstration that takes about two square feet of Ferroboard and twenty minutes of your time. Just write:



TRUSCON® a name you can build on

TRUSCON STEEL DIVISION

REPUBLIC STEEL CORPORATION

1100 ALBERT STREET • YOUNGSTOWN 1, OHIO

Export Department: Chrysler Building, New York 17, N.Y.

Building Construction Briefs

- The Super Market Institute reports that member stores plan to spend \$192 million on building and remodeling this coming year.
- Florida's tallest office building, a 22-story structure for Prudential Insurance Co., is being built by the Daniel Construction Co., A.G.C., Birmingham, Ala. It will cost \$10 million.
- Six square miles of slums and blighted areas have been marked out for early clearance and redevelopment, some of it already under way, in 92 projects throughout the country, Albert M. Cole, administrator of the Housing and Home Finance Agency, reported recently.
- A number of state office and institutional building projects in Pennsylvania are being planned as a result of a new law increasing the borrowing capacity of the General State Authority to \$330 million to finance their construction.
- Tallest smokestack in the Southwest is being built as part of the new Republic National Bank Building in Dallas by the J. W. Bateson Co., A.G.C., Dallas. The 450-ft. high stack (plus 50 ft. below ground) is 5 ft. in diameter.

Parking Projects Underway

Municipalities, striving to overcome traffic problems on their streets, are encouraging construction of a number of parking garages throughout the nation. Some are being municipally financed; others are going up as private investments.

Hartford, Conn., plans to build a municipal parking garage for 1,000 cars. It would cost nearly \$3 million. Wilmington, Del., spent \$1.6 million recently for a parcel of land on which it can put up its first off-street parking facility.

Merchants have organized in several cities to build. In Toledo, Ohio, they are planning a \$2-million garage and in Buffalo they are seeking to establish a corporation that would build three garages for \$4.2 million.

Chicago has sold \$22.6-worth of bonds and is authorized to market \$28 million more to finance extensive parking facility plans in that city. Now under construction is the \$8.3-million underground garage beneath Grant Park.

A.G.C. Building Contractors Review Program

• 100 Builders Attend Roundtable Division Meeting in Chicago

» A challenging number of weighty problems was tackled by the more than 100 building contractors in attendance last month at the A.G.C. Governing and Advisory Boards meeting.

Division Chairman Frank Burrows, of Williams & Burrows, Inc., Burlingame, Calif., presided over a session which considered such matters as labor relations, industry cooperation, bidding procedures, accident prevention and apprentice training. High on the agenda was a report by Walter Couse, co-chairman of A.G.C.'s joint co-operative committee with the American Institute of Architects. The committee has been studying measures to increase the effectiveness of the industry through better relationships between contractors and architects.

Welton A. Snow, manager of the division, Washington, D. C., reviewed developments in the industry since the annual A.G.C. convention in Miami last March. He told the builders that progress is being made in apprentice training and that sustained support of the A.G.C. apprentice program should continue to yield results. According to the Bureau of Apprenticeship of the U. S. Department of Labor, the number of registered apprentices in the construction trades has jumped

from a total of about 75,000 the first quarter of last year to about 80,000 the first quarter of this year.

Mr. Snow reported results of investigation into alleged excessive compensation insurance rates reflecting the trend to award liberal benefits. He urged that A.G.C. building chapters strengthen harmonious relationships with subcontractors in their areas and described the success of a number of A.G.C. chapters in that respect.



Building Division officers: Vice Chairman Frank J. Rooney, Miami, Fla.; Chairman Frank F. Burrows, Burlingame, Calif.; and Welton A. Snow, division manager, Washington, D. C.



A.G.C. Joint Committees with Industry Meet

• Sessions Held With Architects and the Producers' Council

» A.G.C. joint cooperative committees with the American Institute of Architects and the Producers' Council met last month in conjunction with the Governing and Advisory Boards meeting in Chicago to discuss recent industry changes affecting the parent associations.

A.I.A.-A.G.C. Committee Actions

The A.I.A.-A.G.C. committee discussed proposed changes in the insurance provisions of the architects' contract documents and recommended that they be referred to the parent associations for consideration.

Committee members recommended wider distribution be given to the recently revised *A Guide to Bidding Procedure* to include industrial firms, the National Association of Manufacturers and the Chamber of Commerce.

Concerning modular coordination, the committee commended William Demarest, of the A.I.A., for his brochure entitled *Building Better from Modular Drawings*, and also voted to urge building materials producers to adopt the modular system, which is based on the use of 4-in. increments or "modules" in establishing the size of bricks, door frames and window frames.

Excessive Number of Alternates

In a discussion period following the regular meeting, the question of architects specifying an excessive number of alternates was raised, together with the question of adding addenda just before bid opening dates. It was pointed out that recommendations con-

cerning these items are set forth in the *Guide to Bidding Procedure*.

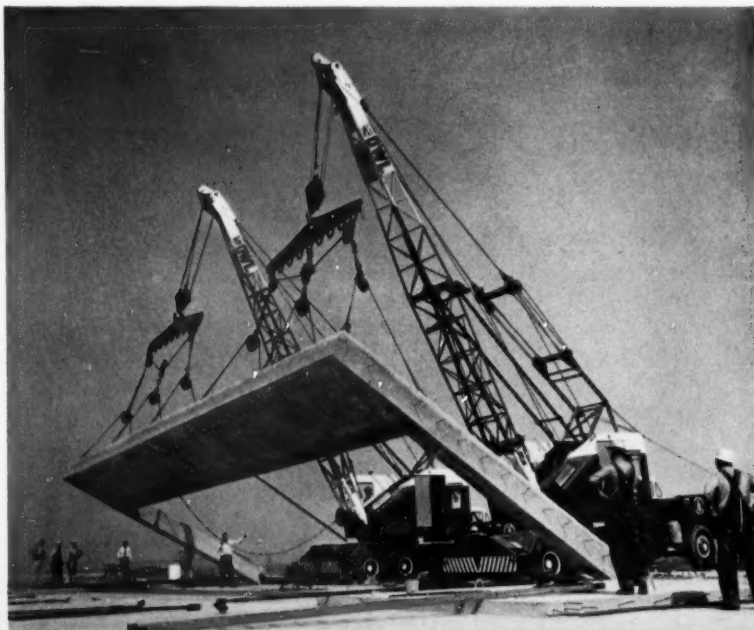
The joint cooperative committee of the Producers' Council and the A.G.C. met in Pittsburgh, September 17, and discussed a preliminary list of films and educational programs about new building products which various sub-committees have already screened for early distribution to A.G.C. chapters to determine their reaction to the program.

A motion was passed to refer to the A.I.A.-A.G.C. and A.I.A.-P.C. joint committees for study the question of retained percentages on certain building products.

For the sake of closer cooperation, it was recommended to have A.I.A. representatives present at the next session so as to hear from all sides of the industry.

Members and guests of the A.I.A.-A.G.C. Joint Cooperative Committee meeting in Chicago were (left to right): Bernard Rothschild, A.I.A., Atlanta, Ga.; Harry B. Tour, A.I.A., Knoxville, Tenn.; William Stanley Parker, A.I.A., Boston, Mass.; Howard D. Smith, A.I.A., Louisville, Ky.; Earl T. Heitschmidt, A.I.A., Los Angeles, Calif.; James W. Cawdrey, A.G.C., Seattle, Wash.; Walter L. Couse, co-chairman, A.G.C., Detroit, Mich.; Max H. Foley, co-chairman, A.I.A., New York City; Theodore I. Coe, co-secretary, A.I.A., Washington, D. C.; Welton A. Snow, co-secretary, A.G.C., Washington, D. C.; John T. Testman, A.G.C., Albuquerque, N. M.; E. J. Wheeler, A.G.C., Cincinnati, Ohio; John E. Healy, A.G.C., Wilmington, Del.; Frank F. Burrows, A.G.C., Burlingame, Calif.; and Robert W. Long, A.G.C., Kansas City, Mo.

The largest pre-cast concrete wall section ever hoisted into place starts up to complete one wall of the new 111th St. building for North American Aviation in Los Angeles. It is one of three sections, each measuring 62 ft. wide and 27 ft. high with hangar type door openings 58 ft. by 18 ft. Each section weighs 58 tons.



How big is a scraper payload?



Because there are several ways to figure equipment capacity, it's mighty important that payload ratings are compared on the same basis. For example, if you use the struck figure for one unit and the heaped capacity for others in making a production estimate, the result can mean an unprofitable bid and higher costs per yard moved.

And heaped capacity ratings can be misleading too, because just how high is a heap? Some manufacturers use a heaped figure based on a 1:1 slope while others prefer a more conservative and practical rating of 3:1 slope. Heaped loads can vary by several cubic yards depending on the material, method of loading and hauling conditions. For example, the Euclid Scraper carries 15.5 cu. yds. with a level load, 18 cu. yds. with load heaped to 3:1 slope and 21 cu. yds. at 1:1 slope.

When you're in the market for scrapers to supplement or replace your present equipment, be sure to check struck capacity and other specifications such as engine horsepower, loaded travel speed, scraper operating controls and hourly cost and production data.

How big is a scraper payload? You can't tell how much dirt is in the bowl just by looking—it's the pounds of pay dirt that tell the story. By actual scale weight, "Eucs" carry more pounds of payload than scrapers of comparable size because the design of the low, wide bowl provides good loading action and exceptional compaction.

You'll find there are good reasons why "Euc" scrapers outperform all others of comparable size. A Euclid distributor near you will be glad to supply all the facts—without any obligation, of course.

The EUCLID ROAD MACHINERY Co., Cleveland 17, Ohio



LEVER ACTION is an exclusive Euclid development that eliminates all but 13 ft. of cable... no more cable replacement expense or down time due to cable breakage. All four hydraulic hoists that operate bowl, apron and ejector are interchangeable.



CUTTING BLADE consists of 4 sections, each interchangeable and reversible. This Euclid design permits easy adjustment to provide blade arrangements that are most efficient for loading any type of material from loose sand and top soil to heavy clay and shale.



Euclid Equipment

FOR MOVING EARTH, ROCK, COAL AND ORE



Contractors Study Specifications Reforms

• A.G.C. Task Units Report Cooperation with Federal Bodies

» HEAVY construction and railroad contractors at the A.G.C. Governing and Advisory boards meeting in Chicago last month reviewed the activities of the association's task units on specifications and contract forms. Several such groups, composed of responsible A.G.C. contractors, represent the industry in discussions with federal agencies on construction specifications and requirements.

The contractors also took action in three resolutions which were recommended to the Governing and Advisory boards. In one, they renewed opposition to the award of any government contract at an adjusted price because of a plea of error in bidding. In another, they condemned the day labor operations of the Tennessee Valley Authority. Another motion was passed endorsing resolutions of the Labor subcommittee and Executive Committee which called for legislation to provide judicial review of administrative decisions of the Secretary of Labor under the Davis-Bacon Act. (See actions of boards on Pages 24-27.)

J. A. Henderson, of United Con-

struction Co., Winona, Minn., and chairman of the task unit assigned to cooperate with the Corps of Engineers, told the contractors that constructive achievements were resulting from the joint efforts of the Corps and the A.G.C. representatives to strengthen relationships. Discussed with the Corps recently were such problems as materials over-run and under-run restrictions, cement testing procedures, bond premium recoveries and flexible pavement specifications. At the last meeting of the task unit and the Corps, Maj. Gen. S. D. Sturgis, Jr., chief of engineers, attended with 10 of his staff members. Six contractors and members of the national A.G.C. staff represented the industry.

Study Municipal Specifications

William H. DeButts, of C. F. Lytle Co., Sioux City, Iowa, chairman of the task unit for the Bureau of Reclamation, announced plans of the unit to meet with the bureau in October.

Municipal specifications are being studied by a task unit with the American Public Works Association. F. S.

Oldt of the F. S. Oldt Co., Dallas, Tex., reported efforts being made to improve the standard sidewalk and curb specifications of the A.P.W.A. Both groups are working on a uniform form of contract for municipal engineering construction projects to be mutually agreeable.

Report Pavement Requirements

U. S. Air Force construction specifications, particularly for flexible pavement, are being studied by an A.G.C. committee headed by N. K. Dickerson, of Dickerson, Inc., Monroe, N. C. Some of the questions explored at the last meeting of the committee with the Airfields Branch of the Corps of Engineers included compaction and density requirements, job mix formulas, use of local materials, payments for test strips and aggregate requirements.

J. M. Sprouse, manager of the Heavy Construction and Railroad Contractors' Division, urged that A.G.C. chapters and branches seek to establish contact committees with the federal bureaus on their local levels and try to work out mutual problems with representatives of such bodies. Division Chairman C. W. Cunningham, of Condon-Cunningham Co., Omaha, led the meeting in discussion of bidding errors, safety requirements and other matters.

Secretaries of A.G.C. heavy construction and highway chapters met in an additional session.

Heavy Construction Briefs

- A \$199-million program to provide protection for 46 cities in the Kaw River basin from floods as large as those in 1951 was recommended recently by three engineers hired by the state of Kansas. The engineers submitted plans for channel improvement and levee construction to the Kansas Industrial Development Commission, which is opposing federal protection plans for the area.

- What is believed to be a world's record for tunnel boring in large-diameter timber-supported projects has been registered in the Siskiyou Mountains on a hydroelectric project of Pacific Gas and Electric Co. Walsh Construction Co., A.G.C., New York, contractor on the 23-ft. diameter, 21,315-ft. long tunnel, that a crew advanced 314 ft. in a six-day period and installed all the heavy timber supports meanwhile.



James M. Sprouse, manager of the A.G.C. Heavy Construction and Railroad Contractors' Division, and C. W. Cunningham, chairman of the division, led discussions among the contractors at the Chicago meeting.

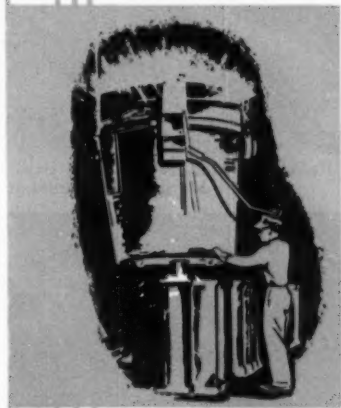
Subj : **Expansion "Progress
Report" From Connors**

To : **All Connors Customers**

1. Approximately one year has passed since the completion of Connors' expansion program. This program, which increased production by more than 40 per cent, also enabled us to serve you with a new range of shapes and sizes. Further, a higher quality steel was achieved.

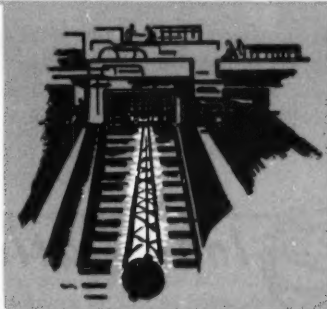
2. Our new electric furnace, new rolling mills and other expanded facilities are now operating smoothly.

3. We are grateful to all Connors customers for their business and goodwill. We invite inquiries from both present and prospective Connors customers.



**CONNORS
PRODUCTS**

CONCRETE REINFORCING BARS
HOT ROLLED STRIP
MERCHANT BARS
SPECIAL SECTIONS

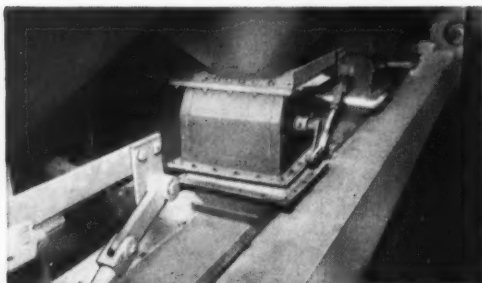


CONNORS STEEL DIVISION

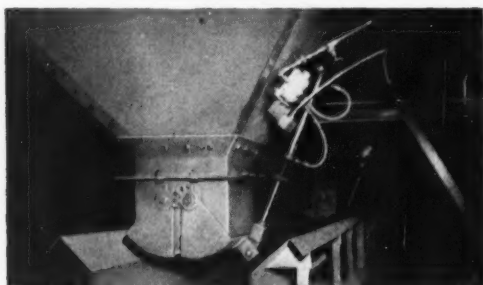
H. K. PORTER COMPANY, INC.
OF PITTSBURGH

P.O. BOX 2562 • BIRMINGHAM, ALA.

ANOTHER LEVITTOWN and ANOTHER HELTZEL



Heltzel patented tubular valve eliminates jamming, has pin-point accuracy.



Double clamshell remote control aggregate gate adjustable to control speed.



Levitt's third Heltzel plant promises new concrete batching records for leading city builder.

famous city builder sets third HELTZEL plant into operation at fabulous Bucks County development

Down in Bucks County, Pennsylvania, William J. Levitt, head of the city building firm that bears his name, recently set into operation his third Heltzel concrete batching plant. The fact that his two previous Heltzel plants set record-smashing production records convinced him of Heltzel's ability to produce. In fact, the first plant played a big part in

helping him astound the construction world with his Long Island Levittown. It batched concrete on an average of 1800 cubic yards per day, and on occasion rang up amazing 2,000 yard plus days. His second Heltzel plant was used mainly in the construction of concrete blocks, and untiringly kept pace with the fastest concrete block production on record.

This new Heltzel plant promises even greater things. It's completely integrated—from supply hoppers to conveying equipment to automatic batcher—it's completely designed and built by Heltzel to give Levitt the nation's most efficient concrete batching. Its capacity is an astonishing 300 cubic yards per hour, it's fully automatic with high speed electronic batching that is accurate to the fraction of a pound; the entire operation is controlled from a central control area, and it bristles with many other new Heltzel exclusives that put an end to guesswork and human error in concrete batching.

Portable or stationary, large or small—if you want the finest in modern batching equipment get the Heltzel story before you buy. Heltzel engineers will be happy to work with you in developing just the plant you need for your operations.



Clean line, all-welded A-frame comes completely assembled, easy to erect.

Another New



Installation

» HIGHWAY contractors at the A.G.C. governing and advisory boards meeting in Chicago last month assembled in separate sessions to discuss the future prospects for highway construction, and major problems facing the road contracting industry.

Division Chairman P. M. Thornton of Hancock, Mich., presided over

See article on highway maintenance by contract in Ohio Page 42

roundtable discussions that were generally optimistic about the volume of work that is expected to continue as state legislatures provide additional funds for highway construction. A. N. Carter, manager of the Highway Division, Washington, D. C., told the contractors that the federal aid question is still undecided but that considerable thought is being given to the position of the federal government in state highway planning.

A.G.C. Contractors Testify

A Congressional subcommittee studying the problem recently called upon Mr. Thornton and Mr. George Koss, Iowa A.G.C. contractor, to state their views, Mr. Carter reported. Both of the prominent highway contractors testified that the industry has the capacity to build the roads needed and that competition is keeping costs at a reasonable level. The committee will

Road Contractors Review Current Problems

• Federal Aid Issue and Toll Roads are Discussion Topics

recommend a policy for Congress to follow in future considerations of federal aid to highways.

Standard Specs for Toll Roads

Contractors from states where toll road projects are being planned or undertaken reported the advantages and disadvantages involved for general contractors in that system of financing for needed highways. Some difficulty was reported where design engineers for toll facilities failed to follow standard specifications of the state highway department and thus incurred unnecessary costs. In view of the fact that increasing use is being made of toll financing, the meeting asked that the national A.G.C. Highway Division assemble and distribute up-to-date material on developments in that area affecting road contractors.

Mr. Carter gave a brief review of the trend among state highway departments to contract more maintenance work. A number of states are finding it economical to award contracts for routine maintenance and repair operations.

D. W. Winkelman, of Syracuse, N. Y., a past president of the A.G.C., told the meeting of cooperation with

the American Society of Civil Engineers in attempts to secure relief from the engineer shortage. State highway departments particularly have suffered from the lack of technical personnel and highway planning has been hampered.

Highway Construction Notes

- Texas is putting \$20 million into improvement work on 1,100 mi. of highways this winter and next summer. Widening, reconditioning and resurfacing will take the major portion of the funds. Some 160 different projects have been approved to-date.
- Ohio has a new redistribution law which will give 5% of the states \$11 million income from motor vehicle licenses to townships, 9% to counties, and 9% to cities, for use in highway construction and repair.
- A \$100-million extension to the New Jersey Turnpike is nearly ready to get under construction. The 8.5-mi. stretch will cross Newark Bay and link with the Holland Tunnel.
- About \$700 million will be sought from investors in the immediate future for new or additional financing of toll highway construction jobs in Indiana, Massachusetts and New Jersey, with similar borrowing likely to stem later from toll road plans in a score of other states. Projects involving costs of more than \$1.5 billion are currently under way in seven states.
- The Texas State Highway Commission and Texas A and M College have established a highway transportation research program for Texas to work on problems of highway activity, including economics, materials, specifications, design, construction and maintenance. Thomas H. MacDonald, former head of the Bureau of Public Roads, will be associated with the new venture.
- A \$14.8-million contract has been awarded on the low bid of Walsh Construction Co., A.G.C., New York, for about 20.7 mi. of construction on the New York Thruway. To beat a deadline, the contractor plans to work two full shifts a day, each 10 hours long, six days a week.



A. N. Carter, manager of the A.G.C. Highway Contractors' Division, and P. M. Thornton, chairman of the division, led discussions in industry matters at the Chicago meeting of highway contractors.

ALLIS-CHALMERS INVITES YOU TO . . .

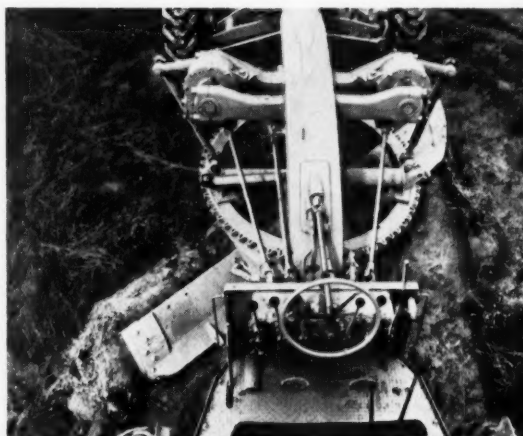
Look at Your Grader Jobs

THROUGH THE EYES OF AN

AD-40 OPERATOR . . .

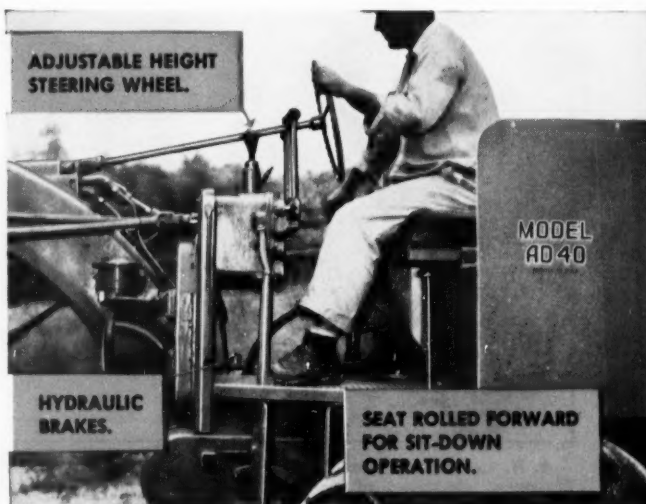


SLOPING— Look how much better you see . . . how much steadier your blade is with small control rods leading out to lift cases located directly over the circle.



SOD STRIPPING— Look at the tapered corners on this clean, wide platform . . . how they give unequalled view of heel of ROLL-AWAY moldboard.

In addition to letting you see better, the AD-40 offers feather-touch hydraulic power steering, hydraulic brakes . . . and true comfort for any size operator, sitting or standing. *Look!*

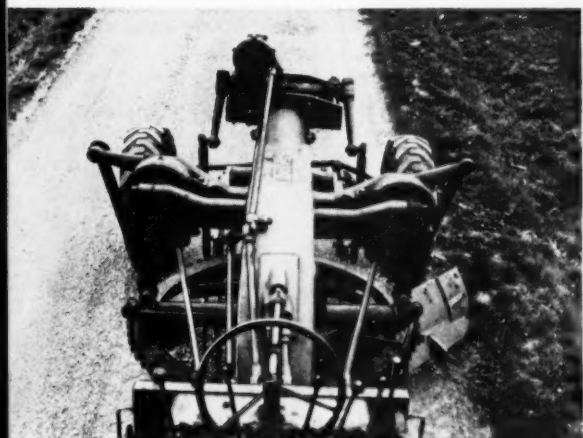




GRADING — Look at that single member frame — it really lets you see what you're doing . . . means efficient grading on *any* job.



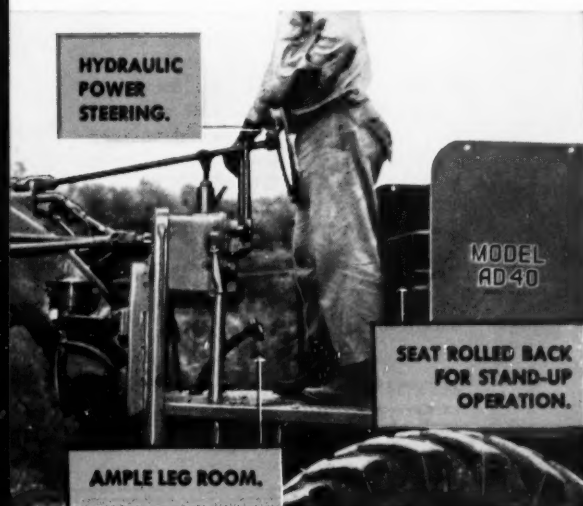
DITCHING — Look at the low control panel. It gives you a clear view of the blade . . . helps insure a clean, smooth ditch.



SCARIFYING — Look at the AD-40, even in scarifying, and you will see it means new, better grader visibility at all times.



- 104 bhp. • Six speeds forward, three reverse
- 23,000 lb. (with optional calcium chloride solution in rear tires — 24,800 lb.).



YES, the big, new AD-40 is designed for today's jobs and today's operators . . . brings new standards of performance to all users of motor graders . . . handles all grading jobs faster, better, easier. You owe it to your operators . . . and yourself to ask your nearby Allis-Chalmers dealer now for a demonstration and *see for yourself.*

ROLL-AWAY is an Allis-Chalmers trademark.

ALLIS-CHALMERS
TRACTOR DIVISION • MILWAUKEE 1, U. S. A.

Highway Maintenance By Contract Works in Ohio

C. W. McCaughey

Chief Engineer of Maintenance, Ohio State Highway Department

» TODAY, the most publicized work of a state highway department is its new construction—the long turnpikes and the wide expressways. These are projects that make the headlines and stir the interest of our citizens. Sooner or later the big projects are built and opened to traffic. Then the design engineers go to work on something else and the newspaper reporters turn to other exciting matters.

For a state highway maintenance organization, that is only the beginning. It is up to us to keep the entire mileage in condition for the increasing traffic, to maintain the pavements and repaint the bridges and a hundred-and-one other tasks that fall to the maintenance engineers. We always hope that the new highways will require a minimum of maintenance. In any event, we must preserve them in the same safe, smooth condition that the taxpayer originally paid for. Maintenance is a continual battle against wear and weather.

Helps Stabilize State Forces

In Ohio we have a maintenance organization which totals about 4,800 workers in number. In the summer months, we put on about 600 additional temporary workers. This is not enough to maintain 17,182 miles of state highways and to repair in a few short summer months the accumulated wear of year-round traffic and the

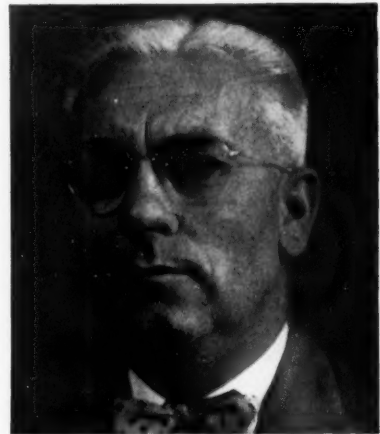
damage of winter and spring weather. So we call upon Ohio's 300 highway contractors and their organizations for help. We do not want our own maintenance organization to be a "feast and famine" proposition. We would rather have a solid core of experienced personnel, steadily employed, performing routine maintenance operations.

\$6.4 Million Let in Contracts

Last year, contractors completed 2,300 miles of bituminous work of several types. Our own forces completed 947 miles which we felt could not be let to contract. Our expenditures for these operations ran \$6,445,894.82 by contracts and \$821,774.17 with our own forces, a ratio of roughly eight-to-one.

Among the types of maintenance operations currently being let to contract are:

1. Bituminous treatments, such as sealing, road mix, and plant mix applications.
2. Undersealing of pavements.
3. Bridge maintenance and repainting.
4. Guard rail reconstruction.
5. Guard rail painting.
6. Roadside weed spraying.
7. Surface, shoulder, and stockpile aggregate.



Mr. McCaughey

As on new construction, the bidding varies and is dependent upon the amount of work available to contractors and other factors over which we have no control. We get as many as six bids per project for some types of work.

Most Below Estimated Cost

For example, 79 separate projects had been advertised for the June 1953 letting, most of them for bituminous treatments, others for guard rail construction and painting and for bridge repair. Fifty-four of the 59 awarded were on bids which were under the engineers' estimates.

The 59 contracts let represented a dollar volume of \$2,343,853, not a large sum compared to new construction. But the advertisements attracted 217 different bids from contractors.

We feel that we tap the best of the competitive contracting industry and so obtain the benefits of low costs, efficiency, and quality. Our advertising for bids can be justified only as long as the contractors demonstrate that they can meet these criteria. That is a responsibility they must assume.

Contractors bid on the bituminous treatments on a basis of cu. yds. of aggregates and gallons of bituminous materials required. They furnish all materials. Specifications are standard

BITUMINOUS TREATMENTS: Ohio advertises millions of dollars worth of this work each year. Mansfield Asphalt Paving Co., A.G.C., Ohio, is contractor here.



This is the first in a series of articles describing the benefits of handling highway maintenance work by contract. Reprints are available.

except where conditions dictate otherwise. Some of the projects run less than a mile; others up to 60 miles. The B. & G. Bituminous Co. of Sidney, Ohio, got a \$63,338 award for the longest stretch of the June 30 letting—53.43 miles of sealing and road mix spot patches. The largest contract that day went to A. J. Ronyak of Burton, Ohio, to place an asphaltic concrete resurface on 12.21 miles for \$110,004, a figure 17% under the engineers' estimates.

Four of the other successful bids were more than 20% under estimates.

We keep cost records on contract maintenance operations. From them we discover that in 1952 we got repair work for the following prices:

Seal treatment: \$0.0844 per sq. yd. (based on 12,386,047 sq. yds. over 1,166.08 miles for a total of \$1,045,963.37).

Road mix or drag treatment (Averaging $\frac{7}{8}$ in. thickness: \$0.3576 per sq. yd. (based on 5,250,641 sq. yds. over 536.98 miles for a total cost of \$1,877,786.53).

Asphaltic Concrete resurfacing (Averaging $1\frac{1}{2}$ inches thick): \$0.7343 per sq. yd. (based on 4,689,532 sq. yds. over 438.98 miles for a total cost of \$3,433,341.32).

Sub Sealing: \$0.1941 per gallon (based on 130,979 gallons over 10.67 miles for a total cost of \$25,447.19).

Guard rail reconstruction: 13,644 ft. for \$21,600.

Guard rail painting: 510,476 ft. (one coat) for a cost of \$39,700.

Aggregate on surfaces, shoulders and stockpile: 540,000 tons for a cost of \$1,290,000.

Bridge maintenance: 198 structures cleaned and painted for a cost of \$115,160. Nine structures repaired for a cost of \$83,000.

Weed spraying: Muskingum County (all roads) in 1953. Three sprays along 183 mi. and two sprays along 46 mi. for a cost of \$5,375.

Tree trimming: 1321 trees—\$7,000.

Tree removal: 583 trees—\$31,600.

These are types of work which we have found suitable for contract awards. We have learned through years of experience that there are benefits for us and for the people of Ohio by this procedure. It was our philosophy as early as 1929, and it is today, that much road maintenance can be performed by contractors and that a state highway department can serve the public more economically and more efficiently by seeing that such work is done by contract.

Twenty-four years ago, Harry J. Kirk, then Ohio's director of highways, reported to the governor that "as a general rule, on public work, all operations the cost of which can be accurately estimated in advance, making possible the use of open competitive bids, should be carried out by the contract method." Mr. Kirk, now Manager of Safety for The Associated General Contractors of America, declared at that time, "There is opportunity for more economical administration of the state's road dollar by extending the use of the contract system further in the handling of maintenance operations."

Experimentation Continues

It has been our objective in the years since to experiment with our maintenance requirements and, when a satisfactory unit estimate can be obtained for a particular type of operation, to let it to contract. We have not been successful in every case. We have learned by experimentation what we can expect from our contractors. The result is a more streamlined and stable maintenance administration.

This season we are exploring the prospects of letting roadside weed control to contract. On a trial contract awarded to the Chemi-Trol Chemical Co. of Gibsonburg, Ohio for \$5,375, all the state roads in Muskingum County were sprayed. The contractor, operating four outfits, sprayed the entire mileage of roadsides in record time. We consider this trial project highly successful.

Such experiences—both good and bad—determine which way to go. By them we hope to find that happy medium between doing maintenance work by the contract method and doing it with state forces.



BRIDGE REPAINTING: 198 structures were repainted by contract in '52.

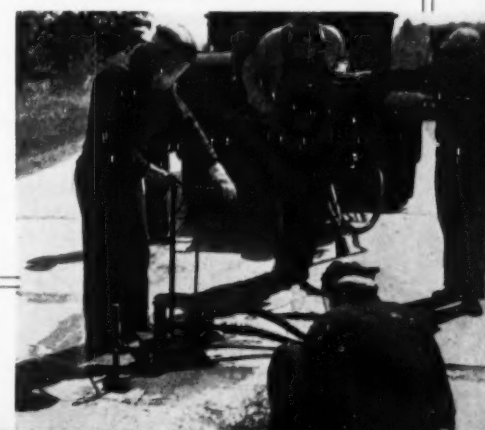


GUARD RAIL PAINTING: Contractors have done this work for years in Ohio.



WEED SPRAYING: Now being done by contract on a trial basis successfully.

SUBSEALING: Frequently contracted by Ohio's Road Maintenance Department.





Abandoned for 24 years, the multiple-arch Sutherland Dam near Ramona, Calif., is now being finished so that it may fulfill its original mission of supplying water for the City of San Diego. The intricate form work on the buttresses and arches may be seen in this photo of operations now in progress. Excavation on all sections was completed recently and pouring was begun on the arches.

(Photo from Southwest Builder & Contractor)

Bent Widows To Complete Abandoned Dam As Last Job of 60-year-old Family Firm

» FAITH can not only move mountains, it can erect dams. The \$2,896,-485 Sutherland Dam near Ramona, Calif., which will be the last job of the 60-year-old Bent Construction Co. and may be the last multiple-arch dam ever to be constructed, is a case in point.

The Sutherland Dam was begun in 1927 as a project to supply water to the City of San Diego but abandoned a year later due to lack of funds and misunderstandings over water rights. Twenty-five years later it was decided to complete the structure but work had scarcely been resumed when the ill-fated dam suffered another setback.

H. Stanley Bent Jr., who was in complete charge of construction, became lost in a rainstorm and was killed when his plane crashed near his home at Newport Beach, Calif. Within a month of this tragic accident the elder Bent died after a long illness. It meant the end of the Bent Construction Co., a charter member of A.G.C., founded by young Bent's uncle, Arthur S. Bent, fourth president of A.G.C., as Arthur S. Bent, Contractor.

It also meant that completion of the Sutherland Dam would once more be

postponed pending selection of another construction firm. The widows of the two contractors decided otherwise, however. Abandonment of young Bent's proud hopes of completing the dam and allowing the Bent Construction Co. to be dissolved without completing its last job was unthinkable to Mrs. H. Stanley Bent and Mrs. H. Stanley Bent Jr. Courageously they made the decision to complete the dam as an act of faith to the departed men.

"It was because Stan was so proud of having landed the big contract for the Sutherland Dam and worked so hard to get the plant set up and running so very successfully at the time of his death that his wife and I felt it would be almost sacrilege to sell out and not allow it to be finished as a Bent Construction Co. job," said Mrs. Bent senior. "All of Stan's plans are working out to perfection and we are so proud."

The older Bent's illness for a year before his death prevented him from taking any part in the operation of the family firm. He had made his son an equal partner in the firm and changed the name from Bent Bros. to its present title at the time of the death of his brother, A.G.C. past-president



In the family tradition—H. Stanley Bent III, tries on an engineer's hard hat with the assistance of his mother, Mrs. H. Stanley Bent Jr., as Mrs. H. Stanley Bent Sr. looks on. Below, H. Stanley Bent Jr., who was in complete charge of construction of the dam when he was killed in an airplane crash early this year. When his father died a month later, the two widows pledged themselves to bring the dam to completion.



Arthur S. Bent. The bid for the dam was prepared under young Bent's supervision and was never seen by his father, nor was the elder Bent ever able to make the trip to see the dam.

Young Bent had been with Bent Bros. for nine years before entering the Army. He had worked on three of the large dams built by the firm including Friant Dam near Fresno which was one of the four largest dams in the world at the time it was built and for which he was in complete charge of all the concrete poured. Young Bent became a captain in the engineers during World War II and served overseas for three years.

Altogether the firm built 32 dams, among them Devil's Gate Dam, Morris Dam, San Dimas, Pacoima, Little Rock, Henshaw, Lake Hodges, Sweetwater and Conchas. Mr. Bent senior was mayor of San Marino from 1942 to 1945 and also served as a city councilman and head of the building and police commissions.

The elder Mrs. Bent and her daughter-in-law have become familiar figures around the dam site as they have sought to familiarize themselves with the problems involved in completing Sutherland Dam. Because today's form construction costs make this type of dam excessively expensive it is likely that this will be the last multiple-arch dam built.

Designed by San Diego's Department of Water Development, the original structure was to have cost



This was how Sutherland Dam looked to the present contractors last summer when work on the project was resumed. The old concrete was found adequate in strength after portions of eight buttresses, cut-off walls and tie struts had stood in place for 25 years.

(Photo from Southwest Builder & Contractor)

\$886,742, which was the amount of the contract let to Edwards, Wilkey & Dixon, a Los Angeles contracting firm which is now L. E. Dixon Co., A.G.C., of San Gabriel. The contract for completion of the dam was awarded to Bent Construction Co. and the Daley Corp. of San Diego, as a joint venture, in the amount of \$2,896,485, on June 19, 1952, with the Bent firm in complete charge of construction.

When the Bent widows decided to continue the operation of the company, George Daley, owner of the Daley Corp., was placed in general supervision of the work. The dam will be 1,240 feet long, including the spillway over the right abutment, and the maximum height will be 162 feet above the stream bed. The dam is situated on Santa Ysabel Creek about 10 miles northeast of Ramona.

It is composed of a series of abutments on 60-foot centers, varying from a thickness of 10 feet at the base to

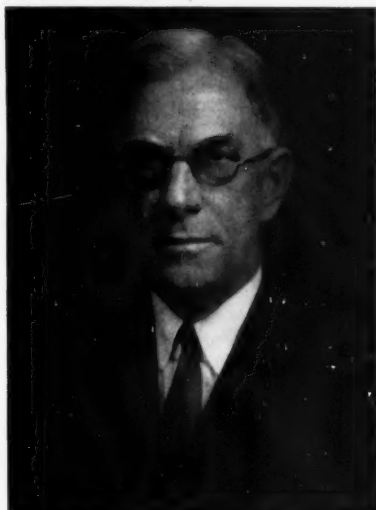
three or four inches at crest. Semi-elliptical arches between abutments vary in thickness from six feet at the base to two feet at the top. Solid gneiss underlies the foundation for the buttresses. The foundation, about five feet thick at the center of the canyon, is about 60 feet for the buttresses high on the slopes of the canyon walls. Concrete cut-off walls shaped like the bottom of each of the arches go down to solid rock.

A grout curtain was pumped into the foundation to a depth of 25 feet at the spillway and 75 feet near the creek bed. The structure will dam water from a watershed 53 square miles in area that annually yields about 16,000 acre-feet. When filled, the reservoir area will be about a square mile. Without spillway gates, the capacity will be 29,000 acre-feet. If gates are installed this will be increased to 36,700 acre-feet.

The original concrete was found to be in good condition when work was resumed after the 25-year delay. As was to be expected, some unusual conditions and problems were encountered by the new contractors. Many of the wooden forms had been left in place when work was abandoned. These had become the nesting place of thousands of bats which fluttered wildly about the valley when the forms were removed.

It was necessary because of the existing buttresses to use very light charges of powder in blasting while excavating for additional cut-off walls, to avoid damage to these structures. In order to resist earthquakes, arched spandrel struts between each of the buttresses had been provided for in the original design. When work was resumed some of these were kept but others were carefully blasted out and diaphragms were put in to improve the distribution of earthquake shock and the appearance as well.

H. Stanley Bent, left, and his brother, Arthur S. Bent, fourth president of A.G.C., who were partners in Bent Bros., predecessor of the Bent Construction Co. Arthur Bent founded the firm as Arthur S. Bent, Contractor, and became a charter member of A.G.C.



A.E.D.-A.G.C. Committee Cites Need for Local Activity



The need for more local joint committees was discussed by the Associated Equipment Distributors-A.G.C. national joint cooperative committee at its Chicago meeting. Those who were present are, clockwise from lower left corner: J. R. Randle, A.E.D.; S. F. Laskey, Northwestern Equipment, Inc., Fargo, N. D.; I. R. Kraemer, Buran Equipment Co., Oakland, Calif.; H. J. Hush, Griffin Equipment Co., N. Y., N. Y.; A. Ashley Carroll, Eastern Equipment Sales, Springfield, Mass.; G. W. Gagel, Machinery & Supplies Co., Kansas City, Mo.; S. John Oechsle, Metalweld, Inc., Phila.; P. D. Hermann, A.E.D., co-secretary; P. A. Dufford, Intermountain Equipment Co.,

Boise, co-chairman; C. E. Cooke, Cooke Contracting Co., Detroit, co-chairman; C. I. Mehl, A.G.C. national staff, co-secretary; P. M. Thornton, Thornton Construction Co., Hancock, Mich.; E. G. Hoepfner, Hoepfner-Bartlett Co., Eau Claire, Wis.; Francis J. Butler, Butler Construction Co., Grand Forks, N. D.; M. Clare Miller, San Ore Construction Co., McPherson, Kan.; Fred W. Shappert, Shappert Engineering Co., Belvidere, Ill.; and M. J. Lyons, Lyons Machinery Co., Little Rock, Ark.

During the meeting the A.E.D.'s Sixth Edition Compilation of Rental Rates and other publications on repair parts and inspection report forms were reviewed.

Industry Conditions Reviewed by C.I.M.A.-A.G.C. Group



The National Joint Cooperative Committee of the Construction Industry Manufacturers' Association and the A.G.C. met in conjunction with the A.G.C. Board Meeting. Clockwise from the left are: J. Conway, Koehring Co., Milwaukee; Kenneth Lindsay, Iowa Manufacturing Co., Cedar Rapids; J. P. Gibbons, Gibbons & Reed Co., Salt Lake City; Carl E. Nelson, Carl E. Nelson Co., Logan, Utah; Ray McLean, Jaeger Machine Co., Columbus, O.; R. E. O'Connor, J. C. O'Connor & Sons, Inc., Fort Wayne, Ind.; C. E. Embrey, A.G.C. national staff, co-secretary; D. W. Winkelman, D. W. Winkelman Co., Syracuse, N. Y.,

co-chairman; W. B. Greene, Barber-Greene Co., Aurora, Ill., co-chairman; Harold F. Hess, executive vice president, C.I.M.A., co-secretary; George C. Koss, Koss Construction Co., Des Moines; P. H. Birkhead, Bucyrus-Erie Co., South Milwaukee, Wis.; Everett F. Armington, Euclid Road Machinery Co., Cleveland; Wardner Scott, W. A. Lynn Construction Co., Lincoln, Neb.; C. J. Haring, J. D. Adams Mfg. Co., Indianapolis; and Ben M. Hogan, Ben M. Hogan & Co., Little Rock, Ark.

The committee also discussed the construction market and conditions in the industry.

Bureau By-Laws Approved

As recommended by the A.G.C. Governing Provisions Committee, the by-laws of the Mixer Manufacturers Bureau and the Contractors Pump Bureau, were approved by the association's Governing Board at the mid-year meeting in Chicago.

In asking the Board's approval, the committee stated that it had reviewed the by-laws and had a complete report from counsel that they conformed to law and that the operations of the bureaus, both affiliated with A.G.C. in the Cooperative Construction Bureau for many years, were within the law.

The committee, reported its chairman, M. W. Watson, has begun a general study of A.G.C.'s governing provisions in collaboration with the managing director, with a view to revising them. Assigned the task by the Executive Committee, the Governing Provisions Committee will seek especially to correct any existing conflicting provisions and to otherwise make them more satisfactory and useful to the association.

In view of the possibility that the undertaking might extend beyond the time of the Los Angeles convention, March 1-4, 1954, the Board authorized the presentation of a resolution at the convention to the effect that Article VII of the A.G.C. by-laws be amended to allow the Board to amend the by-laws by a two-thirds majority vote of the Board members present at a Board meeting and voting.

Army Runs Weather Tests

Army equipment these days must be capable of service in widely varying climes. In order to evaluate equipment before it is standardized and procured in large quantities, the Army's Engineer Research and Development Laboratories, Fort Belvoir, Va., operates two test stations in climatic extremes.

Cold weather tests are held at the Joint United States-Canadian Arctic Test Station at Fort Churchill, Canada, and environmental desert tests are conducted at the Yuma Test Station, Yuma, Arizona.

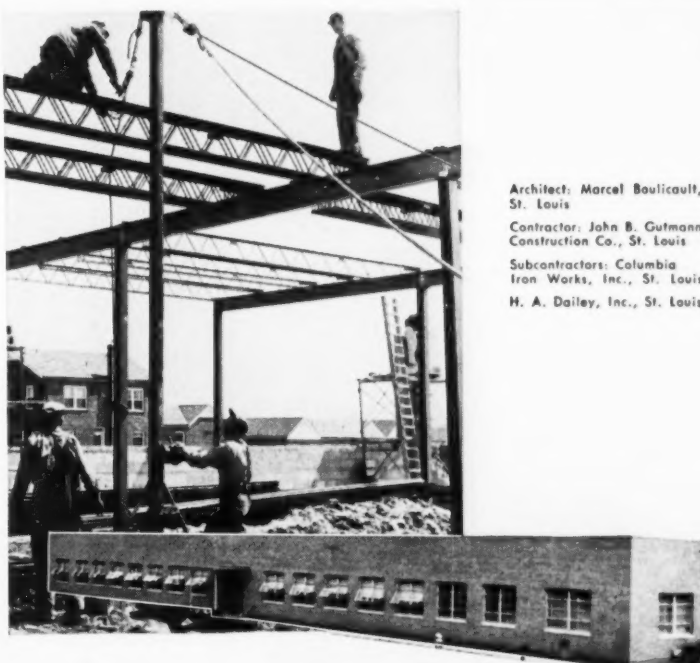
Last winter the Corps of Engineers conducted the heaviest test program at Fort Churchill since its establishment as an Arctic base in 1946. Prefabricated buildings and utilities, tractors, water purification units, a port-

able steam generator and other types of equipment were subjected to sub-zero temperatures during the season.

One of the most important phases of the program dealt with low temperature starting of engines. Four engine generator sets with different systems of winterization were tested as well as two winterized Caterpillar D-7 tractors. The effectiveness of an ice fog eliminator was also examined.

U. S. and Canadian Army engineers

worked together in constructing an Arctic vehicle test road, using a variety of methods in building cross sections in a roadway. Records of construction and performance under traffic are being maintained to determine the most effective method of construction. Tests at Yuma indicated that the processing necessary to adapt equipment winterized for Arctic use to hot weather operation could easily be accomplished by field units.



Architect: Marcel Boulicault, St. Louis

Contractor: John B. Gufmann Construction Co., St. Louis

Subcontractors: Columbia Iron Works, Inc., St. Louis

H. A. Dailey, Inc., St. Louis

65,000 sq. ft. Building Erected in 60 Days with LACLEDE CONSTRUCTION STEELS

Laclede Steel service and construction know-how combined to give Ritepoint Company of St. Louis a new permanent-type building in a hurry. The short completion time resulted from using Laclede steel joists, reinforcing bars and welded wire fabric.



LACLEDE STEEL COMPANY
St. Louis, Mo.



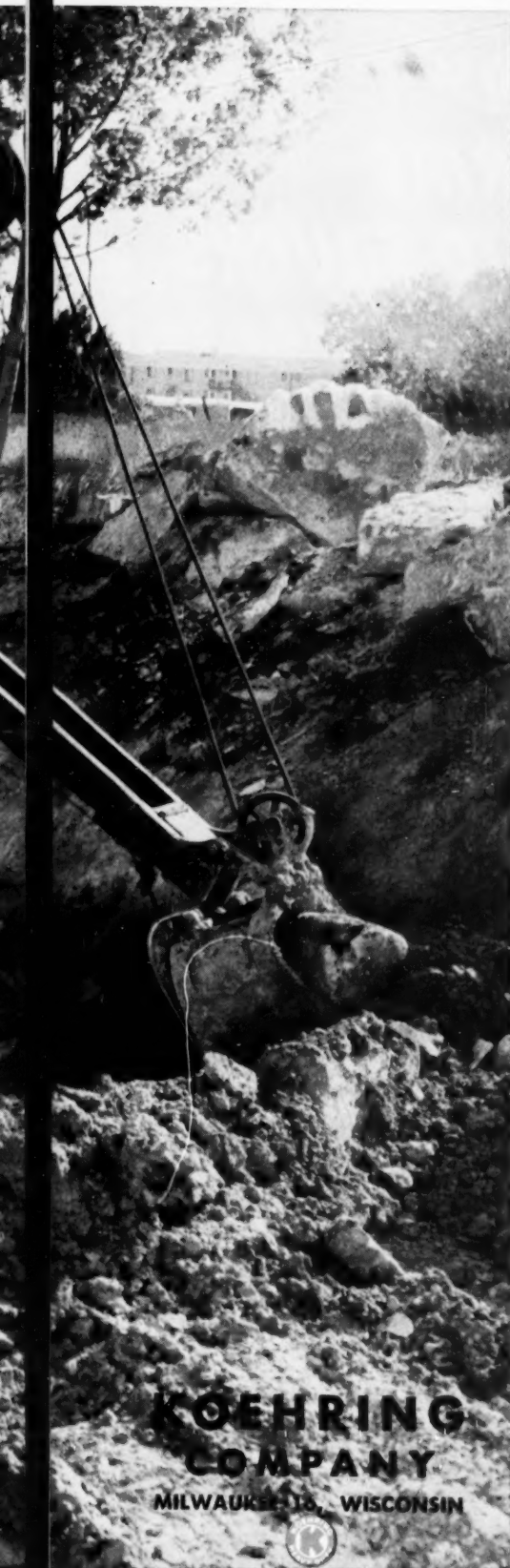
PROTECT YOUR PROFITS with "KOEHRING WORK CAPACITY"

With Koehring excavators and cranes you gain an important profit advantage in extra work capacity. There are some simple ways to check this. Take lift capacities. Obviously, the machine with heaviest lift capacity rating not only picks up larger

crane loads — it has more power and stability to increase shovel, dragline, or clamshell production. Be sure to check this and other clear-cut measurements of "KOEHRING WORK CAPACITY". Your Koehring distributor has all the facts . . . see him soon.

lift capacities up to 79½ TONS . . . ½ to 2½ YARDS dipper capacities

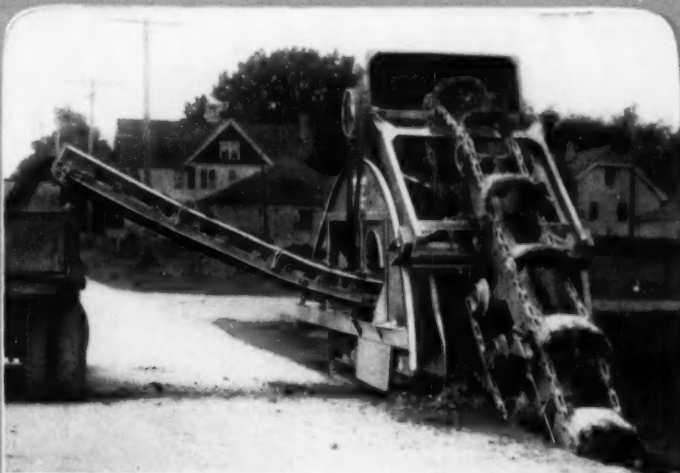
CK333



**KOEHRING
COMPANY**
MILWAUKEE 16, WISCONSIN



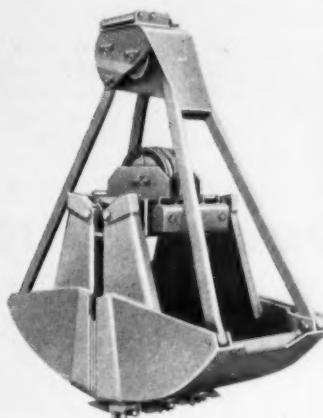
Subsidiaries: KWIK-MIX • PARSONS • JOHNSON



250 TRENCHLINER® cuts 16 to 42 in. wide

... digs up to 12½ feet deep ... shiftable boom cuts to within 11 inches of either side. Friction clutch gives accurate, positive boom control for close grade alignment, and hoists boom to travel position in less than 1 minute. Reversible power-shift conveyor, safety overload clutch, easy-in easy-out "Tap-In" teeth all help keep production high, costs low with this heavy-duty 250. Also check the larger and smaller ladder-types, wheel-type, and mobile rubber-tired Trenchliners at your nearest Parsons distributor.

PARSONS Company, Newton, Iowa (Koehring Subsidiary)



Clamshell Buckets . . . Concrete Buckets

Smooth inside and out, Johnson all-welded Clamshells dig and dump with less resistance. Manganese cutting edge, welded to heavy lips, toughens with use, assures big payload performance. Send for bulletin on 3 types, 10 sizes, ¾ to 3 yards.

For normal-sump concretes of average-size aggregates, check Johnson Finger-Tip Control Bucket (above) . . . ½, 1, 1½, 2 cu. yd. sizes. For low-sump concrete, check 1 to 4-yd. Johnson-Dravo Buckets . . . and 2 to 8-yard Lo-Sump Buckets.

C. S. JOHNSON Company, Champaign, Ill. (Koehring Subsidiary)

FASTEST, EASIEST WAY TO LOAD MATERIAL FROM STOCK PILE INTO TRUCKS



BARBER-GREENE BUCKET LOADERS



No other machine, no other method can equal the speed and efficiency of Barber-Greene Bucket Loaders in loading sand, gravel, and other similar bulk materials from stock piles and storage areas into trucks. At rates up to 3 cubic yards per minute, these loaders dig, lift and convey bulk material in one continuous high capacity

flow, virtually eliminating truck waiting and driver waiting time. Simple to operate, easy to understand. The truck driver can operate the loader to load his own truck. Backed by over 1,000,000,000 yards of material handled by Barber-Greene Loaders, they represent the ultimate in low-cost loading efficiency.

A TYPE THAT WILL DO YOUR JOB BEST

MODEL 543

This self-propelled loader is mounted on a tractor-type chassis and pneumatic tires for traveling from job to job at rates up to 15 m.p.h. Equipped with a hydraulic swivel conveyor, it has the reach to load highest trucks, long trucks and trailers, and trim the load to full capacity every time. Capacity—3 cubic yards per minute. Easily converted for loading coal or snow.



Send for catalogs!

Complete and detailed information on the Model 543 and 82A is contained in individual catalogs available at your request. Ask your Barber-Greene Distributor or write directly to the address below.

MODEL 82A



This crawler-mounted, 3 cubic-yard per-minute Bucket Loader has the stability so often necessary in typical truck loading operations—in pits, on soft or rocky ground, etc. Built for heavy, continuous operations, it is economical enough to justify itself in intermittent service. Complete accessories are available, including single and double deck vibrating screens for loading, screening and scalping simultaneously.

Barber-Greene

Aurora, Illinois, U. S. A.



» **IMPROVED METHODS** to step up accident prevention in the construction industry came under close study by groups of contractors at the Chicago board meeting of The Associated General Contractors of America last month.

Heading the list was a panel discussion on safety in construction which focused the attention of top management on the importance of safe operations if lives and dollars are to be saved on the job.

Moderator of the panel was George M. Schmeltzer, executive director of the Pennsylvania Builders Chapter, Harrisburg, who had on the panel three contractors and one insurance representative. They were Alfred Smith, Thomsen-Abbott Construction Co., Marshfield, Wis.; W. A. Ouweeneel, Siesel Construction Co., Milwaukee; and H. D. Humphries, Concrete Builders, Inc., Atlanta, Ga., general contractors; and H. W. Heinrich, of Travelers Insurance Co., Hartford.

Following brief statements by the panel members the program was thrown open to questions and answers from the floor. The panel was featured by itself on the board meeting program assuring a large turnout.

H. B. Alexander, Accident Prevention Committee chairman, reported to the board meeting on the A.G.C. safety program since the Miami convention, stressing safety ratings of chapters and their individual members, and the current summary report of construction accidents which must be in to the national office from each chapter before November 15.

Mr. Alexander also summarized the

A.G.C. Safety Drive Stepped Up Board Told

• Meeting Features Panel Discussion in Accident Prevention

committee's liaison activities with the A.G.C. Secretaries' and Managers' Council, the National Safety Council, the associations of casualty insurers, and the President's Conference on Occupational Safety.

As general chairman of the Safety Council's construction section, Mr. Alexander also reported on negotiations between the Council and the A.G.C. which would make available to contractors certain material that could help them in their safety programs. This question is still under consideration by both groups.

Safety Public Relations

The public relations subcommittee of the Accident Prevention Committee reported that the A.G.C. membership will be polled by questionnaire soon to determine how many are engaged in accident prevention. The questions will be worded to encourage small contractors that do not have safety programs to take part in the program also.

Subcommittee Chairman A. L. Jackson, A. L. Jackson Co., Chicago, submitted the following program of action to be carried out by the full committee:

• Sell the use of the summary report of construction accidents to A.G.C. officers, chapter secretaries, and the member firms as the foundation of the association's safety program; and as a means of combatting growing agita-

tion for federal and state safety legislation, the rising cost of construction and the deplorable accident rate in the industry.

• Secure statistics and other data for the use of the public relations subcommittee such as: the complete polling of A.G.C. members on safety activities, and the issuance of quarterly reports on chapter participation to be used to stimulate cooperation by non-participants.

• Safeguard progress made to date and insure future progress by building a program of promotion for three different types of chapters: those inexperienced, semi-experienced and those experienced.

Mr. Jackson proposed that local chapters be given a public relations program stressing the value of the press, radio and television media in announcing accident prevention accomplishments. He also called for the publication of a booklet entitled "Accident Prevention In Action" to be ready for distribution by the Los Angeles convention in March. This booklet should include illustrations, anecdotes and statistics on safety, he added.

Harry J. Kirk, A.G.C. safety director, told the public relations subcommittee meeting that recent newspaper articles on the A.G.C. of Missouri's safety flag awards are an excellent example of good public relations in safety.

November 15 Report Deadline

Harry J. Kirk, A.G.C. safety director, reminds chapter secretaries and managers this month that November 15 is the deadline for filing with the national office reports of membership cooperation in the association's accident prevention program. The A.G.C. safety year ended September 30.

Judging from the number of new chapters which have started making reports of their member firms' safety records, Mr. Kirk said that he expects to receive reports from a minimum of 1,000 contractors—a 50% increase over last year.

"This substantial increase in new chapters reporting will be the largest increase since the program was begun some 20 years ago," he said.



At accident prevention panel during board meeting in Chicago are shown the following: seated, panel members, left to right—Alfred Smith, Marshfield, Wis.; W. A. Ouweeneel, Milwaukee; George M. Schmeltzer, Harrisburg, Pa., panel moderator; H. W. Heinrich, Hartford; and H. D. Humphries, Atlanta. Standing, in the same order, are H. B. Alexander, chairman, Accident Prevention Committee; Vice President John MacLeod; and Safety Director Harry J. Kirk.

Construction Deaths Down Slightly in 1952

• Safety Council Reports Irregular Decline in Recent Years

» CONSTRUCTION fatalities last year, following the downward trend of all occupational deaths, numbered 2,400, a reduction of 100 from 1951, the National Safety Council reported in its 1953 edition of *Accident Facts*.

Deaths in all industry totalled 15,000 last year compared with 16,000 in 1951.

At the same time N.S.C. said surveys showed that while construction workers had fewer accidents the ones they had were more severe. Accident frequency, based on the number of mishaps per 1 million man-hours last year, was at the rate of 17.34, compared with 20.92 in 1951. The 1952 severity rate was 2.48 days lost per 1,000 hours worked compared with 2.46 days lost in 1951.

When the figures are compared with the 1935-39 base-period rates for construction it is noted that the industry last year was down 33% for frequency

and 24% for severity, while the rates for all industry in these two categories were down 36% and 43% respectively.

Large Jobs "Safer"

The booklet reported that large construction operations showed "moderate reductions" in both rates, while middle-sized and small operations showed frequency rate reductions but severity rate increases.

In taking a long view of the injury rates in the industry, the report cited that annual data "fluctuate considerably from year to year but show a trend of improvement when viewed over a long period."

Most types of construction had lower frequency rates last year the report states, with the exception of marine construction, earth dams, and tunnel and subway work which also had higher severity rates. On the

other hand, concrete bridge and dam work, public utility construction and structural and ornamental work showed the greatest improvement over 1951 with lower frequency and severity rates.

The survey showed that the average disabling injury in construction cost 143 days lost last year. Included in the average are actual days lost from temporary injury cases and the standard time charges for permanent injuries and fatalities. In 1951 the industry averaged only 117 days lost per disabling injury.

Ranks Near Bottom

The construction industry frequency and severity rates ranked 35th and 36th respectively out of 40 industry categories surveyed by N.S.C. As for frequency, construction kept the position it held in 1951 and was surpassed by these industries in the following order of descent: quarry, marine transportation, mining (other than coal), coal mining and lumber. For severity, construction dropped down one notch from the previous year and was surpassed by the following industries in the same order of descent: lumber, mining (other than coal), quarry, and coal mining.

Corps Praises Contractors

Safety awards were presented to five A.G.C. firms in Minnesota by the St. Paul District Corps of Engineers office for no lost-time accidents last year on Corps projects.

The contractors and their employees were commended by Col. A. H. Bagnulo, commanding officer of the district, for their accident prevention efforts on their construction projects.

Firms receiving the rewards were Haagenon and Tranby Construction Co., McIntosh; Nasvik Construction Co., Bemidji; New London Materials and Construction Co., Willmar; Otto B. Ashbach and Sons, Inc., St. Paul; and Johnson, Drake and Piper, Inc., Minneapolis.

National Safety Congress will hold its 41st exposition in Chicago October 19-23, with the emphasis on the three "E's" of safety—engineering, education and enforcement. The construction session of the congress will begin Oct. 20 with a list of well-known speakers, including John A. Volpe and H. B. Alexander, of the A.G.C.



CONCRETE JOIST CONSTRUCTION

RENTAL and ERECTION SERVICE

Ask for Catalog No. 3100



- ★ Low Cost Form Work
- ★ Fire Proof
- ★ Long Spans
- ★ Standardized Sizes
- ★ Flexible in Design

Gateway offers two types of Metal Pan Systems to contractors: The Nailed-Down System and the Gateway "Slip-In" System. A complete manual of erection details is available by contacting the nearest Gateway office. Centering erection is a "Gateway" specialty. 100,000,000 sq. ft. of Form Area installed, is Gateway's guarantee of service, reliability and responsibility.

Stocked in . . .

CHICAGO—CINCINNATI—NEW YORK—BALTIMORE—KANSAS CITY

Gateway Erectors, Inc.

3233 W. Grand Ave., Chicago 51, Ill. NE vada 2-1100

Safety Conference Program

A 9-point safety program was outlined last month by the President's Conference on Occupational Safety in an attempt to reduce the increasing number of deaths and injuries to the nation's workers due to accidents.

The conference, composed of leaders in business, labor, insurance, education, safety organizations and state and federal agencies, is taking a long look at the nation's industrial accidents which cause 15,000 deaths and 2 million injuries each year in business and agriculture.

Special emphasis is being given to reducing accidents in construction, manufacturing, public utilities, trade, service and government. As a clearing house the conference will draw upon safety officials for advice on the latest techniques used by their organizations, but without "infringing upon management's primary responsibilities for plant safety."

Program Outline

The conference's objectives were recently endorsed by 97% of the coordinating committee which called for:

- Better accident reporting and analysis
- Better machine guarding at source of manufacture
- Better safety education in schools, colleges and plants
- A safety program in more firms
- Uniformity in state safety codes
- More public employee safety
- More public support and understanding of accident prevention
- Greater labor-management co-operation for safety

Stress Local Programs

In carrying out this program, the conference will emphasize the development of safety programs on the local level where it feels they will do the most good. Special effort will be directed toward small businesses where a higher incidence of injuries occur.

So as not to duplicate safety work of other agencies the conference will promote safety in construction, manufacturing, public utilities, trade, services and government. Representatives of agriculture, mining and quarrying, railroads and other forms of transportation are welcomed to work with the conference but the responsibility for safety in these fields will be left to their appropriate agencies.



1. A rugged, balanced deck with beveled rear end to facilitate loading.
2. Two (2) hydraulic rams to cushion movement of the deck up or down.
3. A forward sub-deck to provide extra load capacity and stabilize the trailer by carrying part of the load on the truck-tractor.
4. Legs to support the front end when the trailer is not in use.
5. A substantial gooseneck with conventional fifth wheel which also provides extra space to carry a dipper or other equipment.



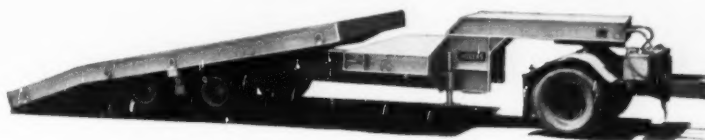
Write
for the
TILT-DECK
TRAILER
LITERATURE

EXPERIENCE
builds 'em



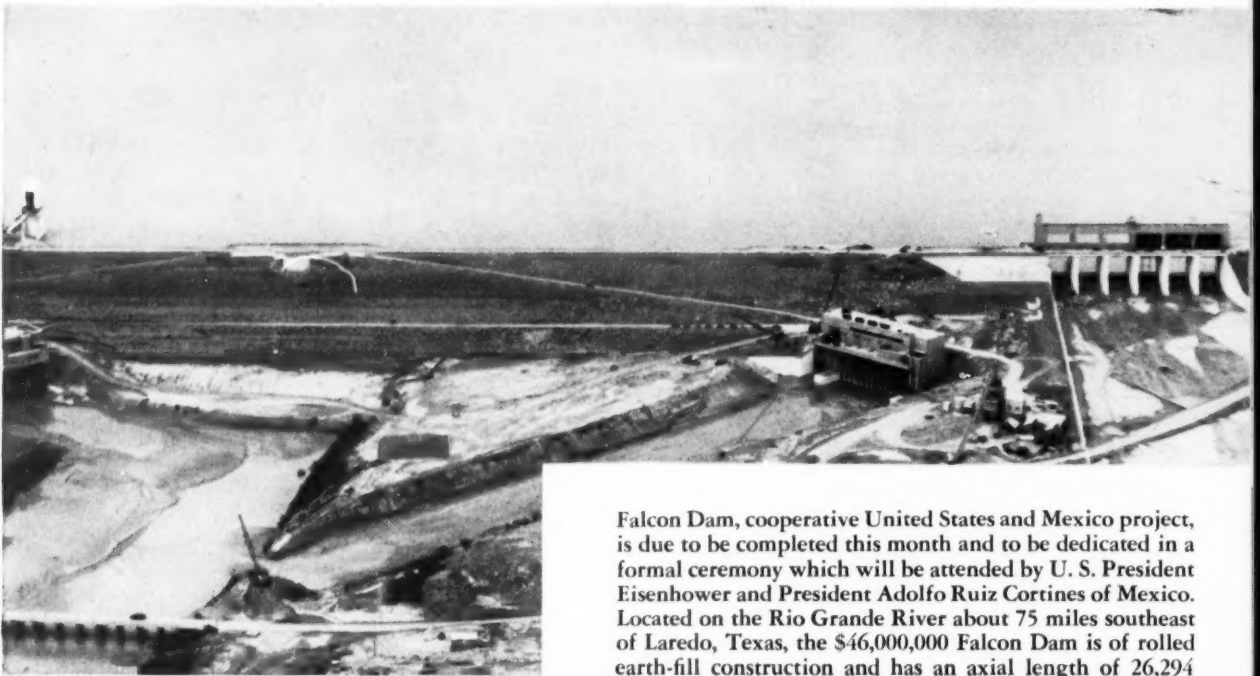
PERFORMANCE
sells 'em

ROGERS BROS. CORP.
ALBION, PENNA. CABLE: BROSITES



Divided bed, tilt deck trailer with gooseneck

GULF PRODUCTS *and* FINE SERVICE



Falcon Dam, cooperative United States and Mexico project, is due to be completed this month and to be dedicated in a formal ceremony which will be attended by U. S. President Eisenhower and President Adolfo Ruiz Cortines of Mexico. Located on the Rio Grande River about 75 miles southeast of Laredo, Texas, the \$46,000,000 Falcon Dam is of rolled earth-fill construction and has an axial length of 26,294 feet. The crest of the dam is 35 feet wide, and maximum height above the present river bottom is 150 feet. The major construction item was 29,415,00 cubic yards of earth work. Both the upstream and the downstream sides of the dam are shown in the photographs reproduced here.



keep equipment rolling on huge Falcon Dam Project

AMIS CONSTRUCTION CO.
OKLAHOMA CITY, OKLAHOMA

MASSMAN CONSTRUCTION CO.
KANSAS CITY, MISSOURI

FOLEY BROTHERS, INC.
ST. PAUL, MINNESOTA

C. F. LYTLE COMPANY
SIOUX CITY, IOWA

EDWARD PETERSON COMPANY
OMAHA, NEBRASKA

SAN ORE CONSTRUCTION CO.
MC PHERSON, KANSAS

TELLEPSSEN CONSTRUCTION CO.
HOUSTON, TEXAS

FALCON DAM CONSTRUCTORS



P. O. BOX NO. 2
FALCON HEIGHTS, TEXAS

June 24, 1953

Gulf Oil Corporation
Houston Sales Division
Gulf Building
Houston, Texas

Gentlemen:

The Falcon Dam and Power Plants constructed jointly by the International Boundary and Water Commission and the Ministry of Hydraulics in Mexico is now nearing the final stages of completion.

We, as prime contractors operating under the name of Falcon Dam Constructors on the United States Section, and Constructors Intercontinental, S.A. on the Mexican Section have used Gulf products exclusively throughout the entire construction of this International Dam. We have experienced superior results in the operation and maintenance of our various equipment through the use of Gulf products on explicit recommendation of your engineering staff.

We wish to commend your organization including the engineering and sales staff in affording us uninterrupted service and supply throughout our entire operation. In the event we might be awarded additional work in this area, we would endeavor to resume our present mutual business relations in the use of Gulf fuels and lubricants.

Yours very truly,

FALCON DAM CONSTRUCTORS

A. M. Croxson

A. M. Croxson
Project Manager



GULF OIL CORPORATION
GULF REFINING COMPANY

Gulf Building
Pittsburgh 30, Pa.

Let us discuss with you how Gulf Quality Products and Fine Service can help you on your next job. They are available to you through more than 1400 warehouses. Write, wire or phone your nearest Gulf Office.

A. G. C. Mid-Year Report

To Governing and Advisory Boards, Chicago, Illinois, Sept. 14-16, 1953

By H. E. Foreman

Managing Director, The Associated General Contractors of America

Introduction

The purpose of this report is to give, as tersely as possible, an account of the principal activities of The Associated General Contractors of America since conclusion of the 34th annual convention in Miami on March 26, 1953.

During that period the association has continued its program of taking positive action on the national developments which directly affect general contractors and their ability to execute their work most effectively.

The association's policy has been consistently to base its immediate and long-range actions on sound principles, without deviations for expediency, so that its work is of maximum benefit to all members, to the industry generally, and to the public.

Period of Adjustment. For a number of months business generally, and the construction industry, have been undergoing a period of readjustment. International developments have led to a truce in the Korean hostilities. The new Administration has been shaking down governmental operations to a more efficient and economical basis. Through careful study and deliberate action, rather than a series of lightning-fast moves, a new climate has been brought about for business. Business activity, generally, has shown a tendency to stabilize on a high level.

Construction activity has been at a record level throughout the year. Latest estimates are that expenditures for new construction during 1953 will exceed the 1952 all-time record by 6%.

An outstanding feature of the construction industry's activity has been the intensifying of competition between general contractors for the new work coming on the market. The competition was already markedly keen at the start of the year.

One effect of this keen competition has been an increase in the number of business failures of general contractors. For investors in construction and the public it has assured increasing value for the investment.

The officers, members of the Executive Committee, and others have given close study to industry developments, to the association's policies, and to the execution of its expanding program. This meeting provides another

opportunity for the elected and appointed representatives of A.G.C. members to review the association's actions and to participate in the determination of its future program.

Construction Markets

For the eighth consecutive year, expenditures for new construction during 1953 are expected to establish a new all-time record. Latest estimates are that the volume of new construction will approach \$35 billion. Maintenance and repair operations will bring total construction activity close to a total of \$45 billion.

Early in the year emergency controls over the start and continuation of construction were abolished. As predicted by the industry, manpower, materials and machinery have been available, with only local exceptions.

It has been a seeming paradox that while the volume of construction has been increasing constantly the competition for new work coming on the market also has been intensifying. During the current period of readjustment, it will be the efficient contractors adaptable to new conditions who will survive.

Industry Capacity Increases. A fact of importance to the nation is that there has been a constant increase in the capacity of the construction industry, and of general contractors, so that all necessary construction can be carried out promptly and efficiently at costs which assure value received for the investment.

The large volume of work has strained the sources of funds for new construction. A trend toward higher interest rates apparently has had its greatest effect on residential construction, which continues at a high rate.

Foreseeable demands for new construction and economic indicators point to a continued high level of construction activity in the future.

Federal Economy. Economy moves by the federal government will curtail the rate of federal public works and defense projects but there still will be a substantial volume. Government departments have been directed to scrutinize their public works programs carefully, and to stress the careful planning of essential projects so that they can be constructed most efficiently.

The A.G.C. has continued all possible efforts to secure the execution of construction projects by contract, and has assisted the chapters in their efforts in their respective communities. Emphasis has been placed on developing additional markets for maintenance by contract.

Contracts and Specifications

Continued progress has been made in the association's long-range program of seeking improvements in fair and equitable contract documents, administrative procedures, and specifications of private and public awarding agencies.

Government Construction Contract. Conferences are being held by representatives of the A.G.C. and the general counsel of the General Services Administration leading toward improvements in the government standard construction contract Form 23. Suggestions have been made with respect to clauses for changed conditions, definitions, and disputes.

Earlier this year GSA issued a revised Form 23 and related documents, originally scheduled for mandatory use by all federal agencies awarding construction contracts on and after June 19. The A.G.C. staff gave thorough study to the proposed changes, and after consideration by the Executive Committee protested the new form to Administrator Edmund F. Mansure.

While stating that many provisions of the contract were one-sided in favor of the government, the A.G.C. called particular attention to the revised disputes clause which, in A.G.C. opinion, would limit judicial review of disputes to cases where fraud could be proved as defined by the Supreme Court.

Mr. Mansure replied to A.G.C. that mandatory date for use of the contract had been postponed to December 1, 1953, and that he wished to have the views of the association and other industry groups.

For more than a quarter of a century the A.G.C. has been working for a more fair and equitable government construction contract form. In 1949 and 1950, representatives of the A.G.C., American Institute of Architects, American Society of Civil Engineers, and American Society of Mechanical Engineers had worked as a subcommittee of the Public Works Construction Advisory Committee to the former Federal Works Agency to develop industry recommendations for an improved contract form. Their recommendations generally had been disregarded in the draft of the latest revised form.

There are reasons to believe that current consultations will be more productive of improvements.

Private Contract Forms. Earlier this month the American Society of Civil Engineers and A.G.C. issued a new *Suggested Form of Contract for Use in Connection with Engineering Construction Projects*. This document

was developed jointly and approved by both groups. It takes the place of the former *Standard Contract for Engineering Construction*, originally issued in 1925 by the Joint Conference on Standard Construction Contracts, and not changed since that time.

At request of the American Institute of Architects the A.G.C. has reviewed and officially endorsed latest revisions to the A.I.A. Cost Plus a Fee Form of Contract.

Both groups have officially approved revisions to the document, *A Suggested Guide to Bidding Procedure*.

Government Specifications. In June the A.G.C. Task Unit on Corps of Engineers Specifications met with Maj. Gen. S. D. Sturgis, Jr., and other members of his staff, for what A.G.C. representatives considered their most productive discussion with the Corps of a 16-point agenda concerning Corps specifications.

In July a special A.G.C. committee met with Corps representatives to consider possible changes in flexible pavement specifications for runways used principally by jet aircraft. A formal submission of A.G.C. recommendations was made to the Corps following the discussion.

The Task Unit for Municipal Specifications is working with the American Public Works Association on revisions to A.P.W.A.'s *Sidewalk and Curb Specifications and Subgrade and Foundation Specifications*. The A.P.W.A.-A.G.C. Joint Cooperative Committee is giving study to a standard form of contract for municipal engineering projects. The new contract developed by A.S.C.E. and A.G.C. is being used as a model.

The A.G.C. Task Unit on Bureau of Reclamation Specifications will meet with Bureau officials later this month to continue its effective work in developing improved specifications and administrative procedures.

Continuing work of the joint cooperative committees of the A.G.C. and the American Association of State Highway Officials and the National Association of State Aviation Officials includes study for improvement of specifications and procedures.

Local Committees. The Army Corps of Engineers and the Navy Bureau of Yards and Docks have informed their field offices that they concur in the association's recommendation that contact committees be established between A.G.C. chapters, the Corps' Division and District offices, and the Bureau's District Public Works Officers for the discussion of local problems concerning specifications, bidding and awarding procedures, and other appropriate matters relating to work in the area.

The A.G.C. task units discuss with the agencies matters on a national basis which are of concern to the agencies and all contractors. They do not undertake problems which are local in character or which concern individual contractors.

Experience has demonstrated that a number of matters

have been brought before them which could be handled more adequately on a local basis, while other matters were attempted to be handled locally when they involved questions of national policy which must be settled in Washington.

A.G.C. chapters and branches now have the opportunity to establish committees with appropriate Army and Navy representatives in their respective areas which can serve to bring about a better mutual understanding of construction problems, and more effective operations.

Equipment and Repair Parts

Close contact between the association and the manufacturers and distributors of construction machinery and equipment has been maintained so that manufacturers and distributors could have information on the needs for new equipment and repair parts, contractors could have information on their availability, and so that action could be taken if serious problems arose.

The current outlook is for adequate supplies of new machinery and repair parts, with stabilized prices.

The joint cooperative committees which the association maintains with the Construction Industry Manufacturers Association and Associated Equipment Distributors meet periodically and report significant developments.

At its previous meeting in March the A.E.D.-A.G.C. joint committee recommended to the respective organizations the formation of local committees between A.E.D. and A.G.C. chapters. The recommendation has been approved by both national associations.

Work on the standardization of sizes and capacities and the improvement of machinery continues through the Mixer Manufacturers' Bureau and Contractors' Pump Bureau, both affiliated with the A.G.C.

Labor Relations

The field of labor relations for all business, and for the general contracting industry, is in a transition period which does not offer a clear view to the future of relationships between general contractors and their employees on the site.

During the past decade the federal government exerted a strong influence on behalf of organized labor. When there were emergency wage stabilization and other controls the government was the predominant influence in the relationships between employers and workmen.

The new Administration has abolished the emergency controls. It was expected to avoid partiality in industrial disputes. But it has not yet defined its labor policy either by executive action or Congressional legislation.

So far during the readjustment period neither the executive branch of government, the Congress, organized labor, employers generally, nor the public have crystal-

lized their thinking on what should be the proper relationships between employers and workers and the function of government with respect to them.

This fact may provide the A.G.C. and other employer associations, as well as unions, with an opportunity which has not been available for many years to develop, recommend, and secure public recognition of sound policies to be followed by employers, workmen and the government.

Collective Bargaining. During the year there has been steady pressure on construction employer groups for wage increases and welfare funds. A.G.C. chapters, in line with an association convention resolution to "help stabilize the economy by avoiding unwarranted increases in wages or fringe benefits which are detrimental to the national welfare," have been conscious of the responsibilities to hold increases in line so that construction costs are not pushed above reasonable levels.

The efforts of general contractors have been made more difficult in many areas by employers in production industries granting another substantial round of wage increases, and by the bargaining groups in construction which employ only one craft.

Union efforts have been noted in some parts of the country to seek to break up employer bargaining groups, but employers generally have stood together.

A major activity this year for the national association has been to provide all possible information and assistance to chapters in their collective bargaining negotiations.

Indications are that the more that A.G.C. chapters and other groups of general contractor employers take the lead in local collective bargaining negotiations the greater are the possibilities of stabilized labor conditions. The national association can be of substantial benefits to local groups in providing assistance.

Government Labor Policy. Labor committees of the Senate and House both held extensive public hearings on possible changes to the Labor Management Relations Act during the past session of Congress. Hundreds of conflicting proposals were made by labor, employer and other groups. So far neither committee has crystallized its thoughts by making a report, or by drafting a bill which reflects majority sentiment. The death of Senator Taft, the Congressional leader on labor legislation, leaves the action to be taken by the next session of Congress even more uncertain.

Although the press has reported the existence of a tentative statement of policy on labor legislation by the President, no official statement of the government's policy had yet been made by the President or the Secretary of Labor by the time this report was written.

Because of the diversity of opinion among A.G.C. members on desirable legislation, the association's Ex-

ecutive Committee has approved a policy of making no public statement until such time as it shall clearly represent majority opinion. Some chapters, with national office assistance, have presented their own views to the committees.

Prevailing Wages. Acute problems have been created for general contractors in a number of states by recent unrealistic predeterminations of prevailing area wage rates made by the Department of Labor.

The association has repeatedly adopted resolutions in the past requesting more realistic predeterminations of the area wage rates which are to apply for federal construction projects. Recently, however, in addition to the issuance of predeterminations of wage rates which contractors state are not truly prevailing, the department has made use of its enforcement powers by rulings after a project has been started or completed that the contractor should have paid the rate for a different craft or classification of worker for particular operations.

The labor committee and national staff have been directed to explore means of securing legislation to permit judicial review of department predeterminations.

Government Departments. The President has made two new appointments to the National Labor Relations Board, and currently has the opportunity to make a third. Previously the majority of the five-man board had been accused of attempting to circumvent provisions of the Taft-Hartley Act in its administration of the act. The board previously did not appear consistent or impartial in accepting or handling cases involving construction. The new appointees are expected to be more objective in their interpretation and administration of the act.

The two top positions in the Department of Labor are filled by representatives from building trades unions which work closely with specialty contractors. The assistant secretaries, in all but one position, are filled from other labor organizations. Aside from top positions, there has been relatively little change in personnel in the department.

Jurisdictional Board. The National Joint Board for the Settlement of Jurisdictional Disputes has been continued for another year. Final details of improvements of the board's procedures are expected to be completed and agreed upon in the near future. The increased number of labor representatives and alternates permits a wider representation and more effective participation in the board's operations.

The A.G.C. has emphasized the need for strengthening procedures to prevent work stoppages caused by jurisdictional disputes, or shortening their duration.

The need for the avoidance of work stoppages and the effective settlement of disputes is being emphasized

as general contractors, and their normal employees, lose work in industrial plants to plant maintenance workers when work stoppages threaten to delay projects beyond the time required by the production company.

There are also strong drives by the maintenance workers of unions in various production industries to prohibit or limit companies in "contracting out" maintenance, repair and other types of construction work.

The A.G.C. has sought to protect the privilege of general contractors to engage in this type of construction operations, and has sought the cooperation of building trades unions in helping to maintain employment opportunities for their members.

Supreme Court. At its next session opening in October the United States Supreme Court will have before it 22 cases for decision involving important principles of labor legislation, of which five are cases directly involving construction. The association will keep its members informed of their outcome.

Apprentice Training. During the year there has been an increase in the number of apprentices in training. Most A.G.C. chapters are participating in one or more programs.

At this meeting there will be a showing of the motion picture, "A Future for American Youth through Apprenticeship," which shows a boy just out of high school enrolling as an apprentice brick mason and working his way to journeyman status. Copies of the film are available from regional offices of the Bureau of Apprenticeship, U. S. Department of Labor for use in encouraging apprentice enrollments. The picture was produced by the department in collaboration with the A.G.C. and other industry associations.

In order to comply with the increasing number of requests from students, vocational schools, libraries, employment counselors and others, the A.G.C. is developing literature which will provide information to encourage young men to enter the industry.

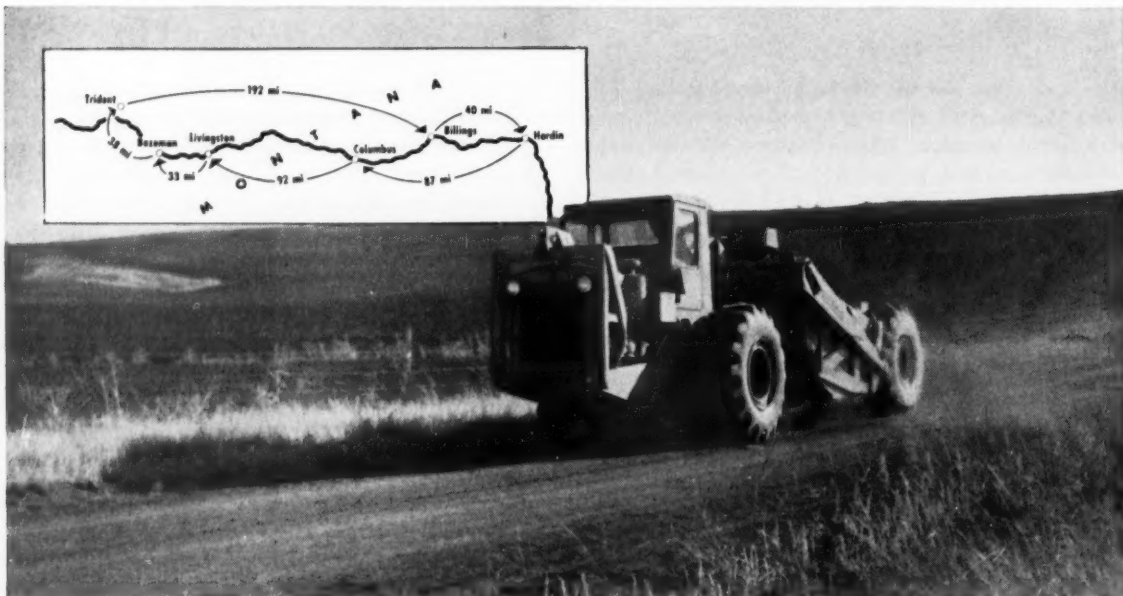
Accident Prevention

Greater numbers of A.G.C. members than ever before are engaging in planned safety measures on their projects and the accident prevention program of the association, locally and nationally, has continued to expand.

These measures undertaken by contractors are daily resulting in the saving of many lives, in the prevention of hundreds of disabling or minor injuries, in a decrease in losses of money caused by disruption of work schedules when there are accidents, and in reductions in insurance rates under experience rating.

In periods of keen competition and close bidding the reduced insurance premiums can amount to the difference between the low bid and the second bid.

Pictures of the month... by LeTourneau-Westinghouse...



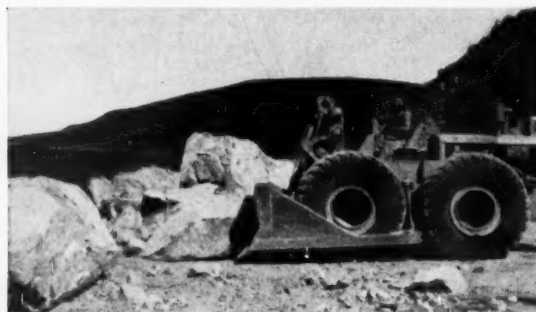
IN 7 DAYS, 10 JOBS, 480 MI—Self-powered moves at 28 mph and high production resulted in a busy 7 days for this Montana-owned D Tournapull. Monday, the "D" stripped gravel from an old roadbed near Billings. Self-loading ability eliminated scarifying and cut 6 hrs from estimated time on this job . . . Tuesday, at Hardin, it leveled 5 acres of farmland in 5 hrs, 3 times as fast as could a crawler and 11-yd pan, according to contractor . . . Wednesday, it raised roadbed and finish-graded 2-to-1 slopes

for a road near Columbus . . . Thursday, widened road near Livingston and filled old irrigation ditch near Bozeman . . . Friday, it completed 4 jobs 30 mi apart: (1) cut farm access road, self-loading up to 7 yds of loam in 45 seconds; (2) cleaned gravel from road ditches; (3) cut down old levee, moving 180 yds of hard clay hourly; (4) leveled field, despite sinking 4 in. into mud when loaded . . . Monday, averaged 20 mph on a 192 mi trip from Trident to Billings . . . Tuesday, leveled field, completing 1400 ft cycles every 2 min.



MOVES SAND THAT OTHERS CAN'T

Finley P. Smith, clearing and leveling Florida beach property, uses 5 D Tournapulls and 3 Tournatractors for all work. He gives as typical output for each Tournatractor-loaded 7-yd "D" . . . 100 pay yds of sand hourly on 600 to 1000 ft hauls, 120 pay yds on 400 ft hauls. Says Smith, "No other scraper can move this beach sand. They're all too heavy to get traction in the poor footing."



HAUL 30 TONS OF ROCK

— 90 miles south of San Diego, Calif., at Ensenada, Mexico, 6 rear-dump Tournatractors and 1 Tournatractor are extending this 130-ft-wide breakwater 5000 ft into more than 50 ft of water. Hauling over existing fill, Tournatractors make one-mile cycles with 12 pay yds every 7.7 minutes. Some rocks hauled measure 5 x 6 x 12 ft and weigh over 30 tons. Tournatractor (below) levels fill and maintains haul road. Say Equipment Owners Clark & Mansilla, "It's amazing how well these machines stand up under the rough conditions we are working in."

Pictures of the month...by LeTourneau-Westinghouse...



KERRMOOR, PENNSYLVANIA — Diamond T Stripping Company, of Philipsburg, moves 7000 cu yds of overburden per 16-hour day with 2 Model "A" Tournarockers. These giant Rear-Dumps haul 50 tons of the blasted rock per trip. They

are loaded by a 6-yd Lima shovel. Operators control Tournarockers easily . . . just push an electric switch to steer or dump . . . flick a small lever to change gears. No wrestling bulky levers . . . no clutching needed. Photos show stripping from a Class D seam of coal.



MINFORD, OHIO — \$56.80! That's all Bill Ward has spent for repairs on his 2 Tournatractors — one 2 years old; the other, 3 months! Used mainly on industrial plant building jobs, units have been 99% mechanically efficient. They drive everywhere without planking. Main assignments: pulling 45-ton trailer, maintaining access roads, leveling dumps, grading parking areas, stockpiling coal.



BUFFALO, N. Y. — At western end of the 427-mile New York Thruway, William J. Crawford moves fill with 3 C Tournapulls . . . compacts with LeTourneau-Westinghouse Sheepfoot Roller. On one section of job, each of his Tournapulls made a 2000 ft cycle every 4.8 minutes . . . delivered 114 pay yds of clay per hour.



GLOUCESTER, MASS. — Big low-pressure tires give Gil Wyner's Tournatractor ample flotation for clearing muck from this rain-flooded gravel pit. Once pit is cleaned, it will provide fill for the final 3.7-mile link in the Boston Circumferential Highway. Despite abrasive footing, tires shown have worked 6,000 hours with one recap. For more information on this and other tools shown on these pages, write LeTourneau-Westinghouse Co, Peoria, Illinois.

Tournapull, Tournarocker—Trademark Reg. U.S. Pat. Off. Tournatractor—Trademark Pic-499-G

For the year which closes September 30 there will be a 50% increase in the number of members, compared to the previous year, who have filed their safety records with the national office. Tabulations of these records later will provide participants with information on how their records compare with others. Approximately 200 awards for meritorious safety work will be presented to members at the next annual convention.

During the year there has been a notable increase in the number of chapters which have undertaken accident prevention programs, or have made their former programs more effective.

Safety Teamwork. A comprehensive organization to attack the problems of construction safety from many angles has been developed by the Accident Prevention Committee. The committee works in close cooperation with safety engineers representing the stock and mutual companies of the associations of casualty insurers, the liaison committee of the A.G.C. Secretaries' and Managers' Council, and the national staff.

Also, more than half the members of the Executive Committee, Construction Section, National Safety Council are connected with A.G.C. firms, chapters or the national staff. The association is represented on the President's Conference on Industrial Safety, and many chapters are active in state safety conferences.

Experience is demonstrating that more effective safety measures lead to improved employee relationships and public relations for contractors.

National Legislation

The first session of the Republican-controlled 83rd Congress enacted 50 items of legislation, including appropriation and authorization bills, of direct interest to general contractors.

Pending for action by the second session which will convene in January are 13 other bills which would directly affect contractors, as well as annual appropriation bills and others which may be introduced.

Naming Subcontractors. The strongest kind of political pressure was exerted on members of Congress during the last session by mechanical specialty contractor organizations, their members, and the international and local unions with which they work for passage of S. 848 and H. R. 1825, which would require general contractors to name proposed subcontractors and their prices in bids for federal projects.

This bill was vigorously opposed by the A.G.C. for the reasons that its intricacies would work a severe hardship on general contractors, would tend to increase the cost of federal public works construction, and could provide the means for reducing the competition of subcontractors.

At the last session the companion bills were favorably reported to the Senate and House by the respective Judiciary Committees. The bill was passed over on the Senate calendar when objections were raised to its consideration. No action was taken on the House floor.

The bills will retain their positions at the start of the second session and will be subject to action by Congress. Members of Congress have reported a great volume of communications (letters, telegrams, telephone calls and personal visits) in support of the legislation. Unless there is a substantial volume in opposition, the legislation is likely to pass.

As analyzed by the A.G.C., the bills would not stop the practices of bid shopping and bid peddling of which subcontractors have complained, but would be harmful to business relationships in the industry and be definitely contrary to the public interest.

Similar legislation, and the entire subject of relationships with subcontractors, were carefully considered by the boards at the mid-year meeting last year, and again at the annual convention in March.

Judicial Review. S. 24, the bill to permit judicial review of disputes arising under government contracts, made its way more than half way through the Congress at the first session. Indications are that favorable action will be concluded at the second session.

Immediately after the Supreme Court decision in the Wunderlich case in November 1951, which limited judicial review of disputes to cases in which fraud (defined as a deliberate attempt to cheat or be dishonest) could be proved on the part of a government official, the A.G.C. took the leadership in recommending that Congress enact legislation assuring those who signed government contracts the fundamental right of judicial review of disputes.

After a temporary delay while there were objections by the Department of Defense, S. 24 was passed by the Senate. Incomplete hearings were held by the House Judiciary Committee. The chairman of the subcommittee handling the bill has stated that the hearings will be completed early in the next session.

Budget and Taxes. One of the knottiest problems with which the 83rd Congress and the Administration have to wrestle is balancing the federal budget and reduction of taxes. Late in August the Secretary of Treasury announced revised information which indicated that "the essential turning point toward a balanced budget" had been reached and passed.

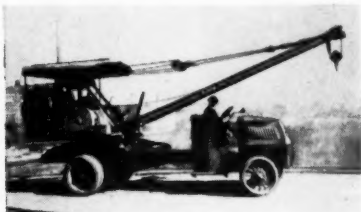
The Administration was successful in securing Congressional passage of an extension of the excess profits taxes until December 31, at which time the income tax increases also will expire.

The Treasury Department and Congressional com-

ADVERTISEMENT

How "Cranes - on - Rubber" Got Their Start

Back in 1918, General Pershing asked for 125 mobile cranes on truck chassis to work on the docks in France to speed up the handling of war material. But, World War I ended before such cranes were available. However, F. A. Smythe, then President of The Thew Shovel Co. in Lorain, Ohio, developed the idea and, late in 1918, the Universal Crane Co., a subsidiary of Thew, marketed the first so-called "Truck Crane."



The first truck crane—1918 model

In the years that followed, much happened to "truck cranes." They became accepted tools of the construction industry, capacities increased, booms became longer, and finally exceeded the capabilities of the commercial truck chassis as mountings. These were replaced with a heavy-duty carrier especially designed for the live, highly-concentrated loads of shovel-crane use. The first such carrier, on which was mounted a Lorain turntable, was the Lorain Moto-Crane, developed and produced by Thew in 1940. Thew Shovel Co. still designs and builds Moto-Cranes in their own plants.

The first Universal Truck Crane had a lifting capacity of 3 tons with a maximum boom of 20 feet. Today, Moto-Cranes are made in a variety of capacities from 6 to 45 tons, with highway speeds up to 33 m.p.h. Rear axles mounted on rocker beams, air steer, large dual wheels, ample tractive effort and the availability of front end drive make them exceptionally efficient for off-the-road travel over soft and rough ground.



World's largest crane on rubber today

While the trade-marked name for the Lorain 2-engine rubber-tire machine is "Moto-Crane," it has been many years since their use has been limited to lifting crane service only. Front ends are also available for shovel, dragline, clamshell, hoe and scoop shovel use as well.

2 NEW

MOTO-CRANE. MODELS BY LORAIN

22½ TONS

LORAIN MODEL MC-424

2 gasoline engines (1 on turntable, 1 on carrier); available as shovel, crane, dragline, clamshell and hoe; 96" over-all width; 10 forward speeds (up to 27 m.p.h.); 2 reverse speeds; air brakes; maximum boom with tip - 125 ft. May be had with diesel power for turntable, third drum, power load lowering, front wheel brakes and many other accessories.

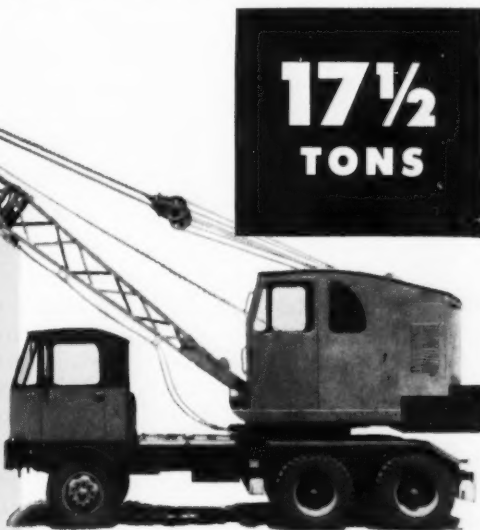


Also available as a companion single-engine Self-Propelled machine — Model SP-424.

17½ TONS

LORAIN-TL MODEL MC-254W

Available as ¾-yd. shovel, crane, dragline, clamshell, hoe or 1¼ cu. yd. scoop shovel. 106" over-all width; 8 forward speeds (up to 37 m.p.h.); 2 reverse speeds; air brakes; maximum boom length with tip is 95 ft. May be had with diesel power for turntable and carrier, with front driving axle, third drum and many other accessories.



Also available as a companion single-engine Self-Propelled machine — Model SP-254W.

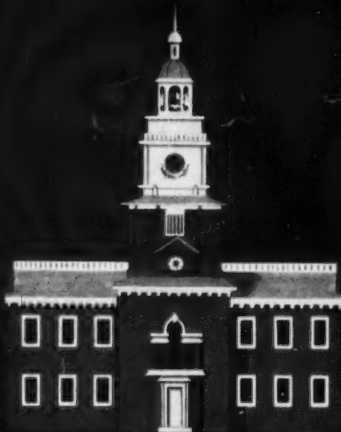
Now you can have even greater selection from the Lorain line of products with the addition of these 4 new Moto-Crane and Self-Propelled models. Thew-Lorain is now better prepared than ever to serve all your shovel-crane needs — whether on rubber tires or crawlers. See your Lorain distributor for the full Lorain story.

THE W LORAIN.

THE THEW SHOVEL CO.,
LORAIN, OHIO

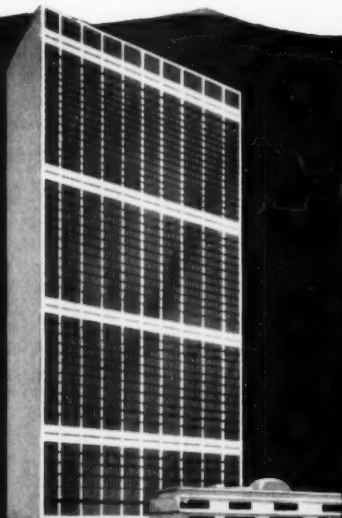
Historical American Landmarks

are Safeguarded and Beautified with **MEDUSA WHITE**



Independence Hall

In the recent restoration of Independence Hall in Philadelphia, Medusa White was used to repoint the masonry work.



The United Nations Permanent Headquarters

Medusa Waterproofed White was used recently for setting and painting the marble, for back-up brick work, and in the terrazzo in the main lobby of this international landmark.



Washington Monument

Years ago when the Washington Monument was restored, its marble joints were pointed up with Medusa White Non-Staining Portland Cement mortar. The grout was neat cement and water, of a very thin consistency.

● When architects and builders are called upon to build or restore historical landmarks the selection of materials must be on a sound basis of proved dependability. Medusa White Portland Cement, the original white cement, is one of those dependable materials that is chosen over and over again to help construct, restore and protect historical buildings like those above.

For 47 years Medusa White (plain or waterproofed) has been

used to give construction a distinctive and permanent beauty. No other cement has ever equalled its white color—a white that's diamond blue—not pink or yellowish in cast.

Specify this famed non-staining white cement plain or colored in those jobs requiring the most attention and confidence. Use it in cast stone, stucco, pre-cast concrete slabs, terrazzo floors. You can depend on the white of Medusa White.



You can build **BETTER**
with **MEDUSA PRODUCTS**



MEDUSA PORTLAND CEMENT COMPANY

Sales Offices

Cleveland 15, Ohio
Baltimore 2, Md.
New York 17, N. Y.

York, Pa.
Chicago 1, Ill.
Pittsburgh 22, Pa.

Washington 5, D. C.
Milwaukee, Wis.
Toledo, Ohio

mittees now are making comprehensive studies of the entire tax structure. When the time is appropriate the association will make recommendations for eliminating a number of inequities for general contractors.

Public works appropriations, generally, were cut below the requests in the Truman budget in about the same proportion as the average for all government expenditures. No cases were reported to the association of hardships caused for contractors by shutdowns of going projects.

During the first session the House passed but the Senate did not act on a bill to extend contract renegotiation legislation beyond December 31. Unless there is action at the next session renegotiation will terminate.

Highway Hearings. Comprehensive public hearings on financing an adequate highway construction program were started during the first session by a House Public Works Subcommittee. The chairman of the Highway Contractors' Division and the A.G.C. co-chairman of the Joint Cooperative Committee with the American Association of State Highway Officials gave comprehensive statements of the views and recommendations of highway contractors. The hearings will be continued and probably will lead to legislation during the next session.

Current indications are that there will be no special session of Congress this fall, but that the second session next year will take action on many subjects of direct and indirect interest to construction. A comprehensive roundup of actions taken and measures pending is published in the September *CONSTRUCTOR*.

Government Relations

An important function of the national association has been to establish contacts with the new personnel of the current Administration and to present information on construction and general contractors' operations.

Because of its experience and the information which it is able to furnish, the association has been able to render valuable assistance to government executives responsible for policy decisions.

In the near future there will be established in the Department of Commerce a business and defense service administration which will operate during peace times and which can be expanded rapidly during periods of emergency to perform the functions of the former National Production Authority. The principal divisions, including a construction and building materials division, will be headed by men selected from industry to serve without compensation for periods of probably six months.

Steps have been taken so that the association will be able to make recommendations with respect to policies which may be adopted by the various government de-

partments and agencies that may have an influence on construction.

The Department of Defense was reorganized effective July 1 and over-all responsibility for the construction, maintenance and use of defense facilities was centralized in the office of one of the newly created assistant secretaries. The A.G.C. will maintain close contacts with that office, as it did with the former Office of Installations.

Chapters and branches and the national association have continued their cooperation with the Corps of Engineers in sponsoring and training reserve construction units in the Army Affiliation Program. Chapters have sponsored 74 units, of which 21 are on active duty with 11 overseas.

Government Commissions. The construction industry has a direct interest in two commissions which have been established to study basic problems of governmental functions, operations and sources of revenue. They will report to the Congress and the President. They are:

- Commission on Governmental Operations, expected to be headed by former President Hoover, which will study all functions and operations of the federal government but will have broader authority than the previous Hoover commission in that it may recommend abolishing governmental functions or organizations.
- Commission on Intergovernmental Operations, which is directed to make a broad and comprehensive study of all aspects of the proper role of the federal government in relation to the states and their political subdivisions, and the appropriate functions and sources of revenue for each.

Both commissions will inquire into the operations of and need for continuing all of the federal aid programs, including the highway, airport, hospital, school and other construction programs. When appropriate, the A.G.C. will present information about construction.

The policy of the association continues to be the presentation of reliable and accurate information about construction to governmental agencies and to make recommendations which are in the best interests of all contractors and the public.

Industry Relations

The association's broad program of working for improved contract documents, bidding and awarding procedures, and design and specifications; a greater understanding of mutual problems, and closer relationships has been continued in cooperation with the professional societies and other associations in the industry.

A greater number of the chapters and branches are

forming joint committees or in other ways are working cooperatively with other organizations in their respective areas to bring about a better construction service.

Annually more than 30 meetings of the various national joint cooperative committees are held, frequently in connection with a national meeting of one of the societies or associations. Statistics are not available on the number of local meetings held.

The specific accomplishments of these committees are described in other sections of this report. The recommendations of the committees are referred to their respective parent organizations for action. Experience has demonstrated that each year these committees have made recommendations which eventually led to more efficient construction operations.

Building Construction

The removal of emergency construction controls resulted in a nine per cent increase in the volume of building construction during the first seven months of 1953 compared to the same period last year.

The principal function of the Building Contractors' Division is to take action on matters of particular interest to building contractors, to keep members and chapters informed of significant developments, and to assist members and chapters in particular problems.

Some of the problems of the industry, such as the actions of subcontractor groups in seeking the award of separate mechanical contracts or changed bidding procedures, have been intensified for building contractors.

Cooperative Work. Much of the division's work is carried out in cooperation with other associations or societies. Following approval by both the A.G.C. and American Institute of Architects, the latest revisions have just been published of the jointly-developed document, *A Suggested Guide to Bidding Procedure*. The principal change is to permit a low bidder to withdraw his bid after bids have been opened, but not to change it, if he can support his claim that an appreciable error had been made in its preparation.

The A.G.C. has reviewed and endorsed the latest revisions in the A.I.A. standard form of private fixed-fee contract.

The joint cooperative committee of the Producers' Council and A.G.C. has been collaborating in the development of educational programs which can be conducted by chapters of the two associations to inform contractors of new materials.

In line with the division's request, the current A.G.C. Task Unit for Bureau of Yards and Docks Specifications includes two building contractors.

Research. The Building Research Advisory Board of the National Academy of Sciences on June 30 trans-

mitted to the Office of Defense Mobilization the final results of its two-year study of conservation in building construction. While the study was initiated to form a guide for conservation during the defense program, it also serves as a guide for the general advancement of building technology. The latest publication makes a number of recommendations for improved research in the building field. The A.G.C. contributes to the support of BRAB, and a number of its members have participated in panels studying various problems.

Highway Construction

The volume of highway construction has continued to increase, and contract awards in 1953 will be approximately 10% ahead of last year, but the amount of new construction still falls far short of the increasing demands of traffic.

The principal function of the Highway Contractors' Division is to take action on matters of particular interest to highway contractors, to keep members and chapters informed of significant developments, and to assist members and chapters in particular problems.

Highway Financing. The predominant problem facing the nation with respect to highways is the means of financing the volume of construction which would provide an adequate system to carry the increasing volume of traffic.

The president of the American Association of State Highway Officials told the House Public Works Subcommittee at its public hearings that expenditures of more than \$32 billion are needed on the nation's federal-aid system alone. If the program to overcome deficiencies were spread over 15 years it would require annual expenditures of \$3.5 billion. The current rate on these highways is about \$1.5 billion.

A.G.C. representatives at the hearings supported the A.A.S.H.O. recommendations, and on behalf of the A.G.C. recommended that there be no diversion of revenues from highway uses to other purposes by any unit of government, and that the federal government assume its proper responsibility for highway needs; that the federal-aid construction program be administered through present channels; that federal-aid funds continue to be available for purchase of right of way; and that there be legislation to permit long-range planning.

They also reported that highway contractors have ample capacity to carry out an expanded highway construction program promptly and economically, and that the public would receive good value for its investment in highway construction.

The A.G.C. is participating in and supporting the Project Adequate Roads program, which is a means of securing wider public understanding of the need for financing an expanded construction program.



Move More with a **MICHIGAN**

"Fast, easy to operate, simple to adjust—ideal machine for owner and operator"—R. E. GOODSON, owner

JOB.....Drainage ditch about ½ mile long—12' top, 10' bottom, 8' deep, Olanta, S. C.

MACHINE....C-16, dragline

OWNER....R. E. Goodson, Darlington, S. C.

YARDAGE....450 per day

MATERIAL....Gumbo clay

FUEL.....15 gallons, 10 hours

COMMENT...."Best machine ever operated. Air control outstanding feature... extremely fast, few adjustments, operator fatigue absolute minimum. Perfect flotation with 30" pads—on hills, in swamp. Easy to inspect all working parts"—Dave Blackmon, operator.

Here's why 3 of every 5 MICHIGANS sold are repeat orders!

- **AIR CONTROL—FAST, SMOOTH, EASY.** Production goes up, fatigue goes down, with a MICHIGAN. Swing is fast, smooth, jerkless—easier on the machine, easier on the operator. It's the air-power pioneer—the MICHIGAN Line.
- **ONE-PIECE CIRCLE GEAR AND CARBODY.** A long, useful and economical life is built into MICHIGANS by the circle gear and carbody cast in one piece. Hook roller paths taper to match the rollers.
- **CAST TURNABLE FOR UNINTERRUPTED SERVICE.** Here's construction usually found in biggest machines: turntable deck, side frames and hook roller mounting brackets

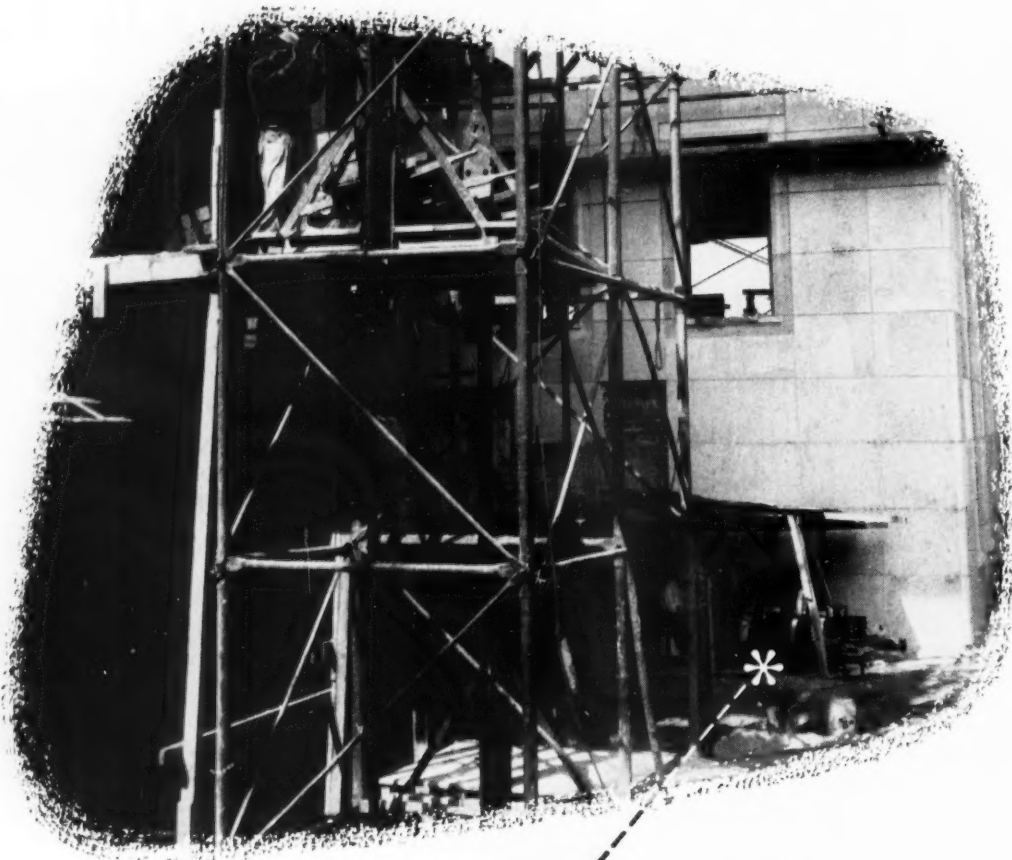
cast integral. Eliminates common cause of wear and replacement.

- **MS CLUTCH . . . QUICKLY REPLACEABLE.** An exclusive MICHIGAN feature—this single-disc double-faced clutch with six interchangeable segments on each face. Replace a clutch in the field in a matter of minutes. Always efficient, and an amazing time-saver.
- **EASY MAINTENANCE AND SERVICE.** Grease the job in minutes per day, compared to 1 or 2 hours usually required. Anti-friction bearings reduce maintenance. Air control does away with complicated linkages—toggles, joints, bushings—thus eliminating tedious greasing.

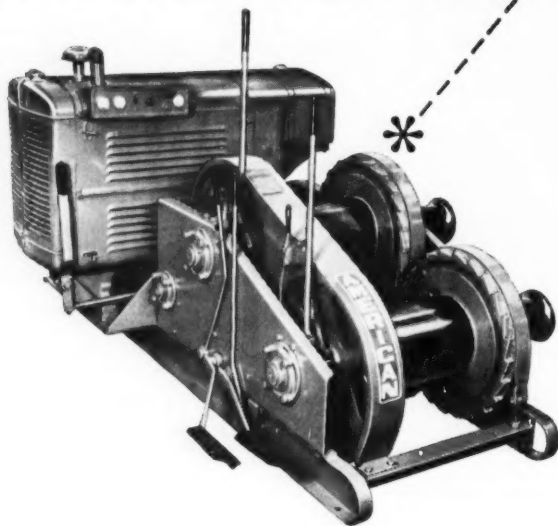
See the MICHIGAN Line in action. Watch these big rugged machines, note the speed and ease and precision with which they operate. Check each one, point by point, with machines of equal capacity. You'll recognize that you get More for Your Money in a MICHIGAN.

Talk to your Michigan dealer—and write for literature.

Construction Machinery Division
CLARK EQUIPMENT COMPANY
485 Second St., Benton Harbor, Mich., U.S.A.



for a lifetime of **smooth, safe stops...**



anti-friction bearings throughout!

Every operator knows anti-friction bearings make his job easier, boost his output. Capacity loads move up and down quickly when all rotating hoist parts run in anti-friction bearings.

Every hoist owner knows anti-friction bearings not only speed the job, but make it more profitable. Hoists are easier to operate, withstand the hardest usage longer.

American Hoists have long been built to satisfy the most exacting requirements of owner and operator alike. Both know American Hoists deliver maximum output with minimum maintenance. Ask your distributor for details on the complete American Hoist line, the line that leads the field!

American Hoist

and DERRICK COMPANY

St. Paul 1

Minnesota

manufacturers of:

Crawler and Truck Cranes • Derricks • Crosby Blocks • Sheaves • Locomotive Cranes • Hoists
Portable Material Elevators • Crosby Clips • Revolver Cranes • Roofers Hoist

A greater awareness of the need for improved highways is evidenced by the actions of many state legislatures this year in authorizing bond issues or providing additional highway funds by other means.

The hearings conducted by the House Public Works Committee last session will be continued and are expected to lead to comprehensive federal highway legislation by Congress next year.

Highway Officials. Close contact has been maintained by A. G. C. representatives with Commissioner of Public Roads duPont since his appointment early this year. He is making changes in the bureau's procedures to speed up its work. Policy decisions will continue to be made in Washington, but greater authority is being given to district offices so that they can handle matters promptly with the states.

This fall meetings of the joint cooperative committee of the A.A.S.H.O. and A.G.C. will be held in connection with the annual meetings of the Southeastern, Western and national associations of state highway officials for the discussion of matters of mutual interest.

Maintenance by Contract. Special emphasis has been given by the national association, and a number of the chapters, to encourage increased highway maintenance by contract. This year more states have demonstrated the economies of maintenance by contract. The A.A.S.H.O. has appointed a committee on the subject. Staffs of the division and *THE CONSTRUCTOR* are collaborating on a series of articles describing the programs of various states.

Airports. Airport construction has lagged since the appropriation to the Civil Aeronautics Administration included funds for only federal-aid airport projects under way and no funds for new projects. Mutual problems will be discussed at the next meeting of the joint cooperative committee of the A.G.C. and the National Association of State Aviation Officials to be held in connection with the N.A.S.A.O. annual convention.

Heavy-Railroad Construction

The volume of work for heavy construction and railroad contractors has continued at record levels this year with increases in public utility and railroad construction.

The Heavy Construction and Railroad Contractors' Division has continued to secure information and take action on problems affecting this type of construction.

Task Units. The work of task units of the Contract Forms and Specifications Committee has been of particular benefit to heavy construction contractors.

The June meeting of the Task Unit for Corps of Engineers Specifications, attended by the Chief of Engineers and other members of his staff, discussed a 16-point agenda including over-runs and under-runs of estimated quantities, cement testing, recovery of bond premiums, and flexible pavement specifications. Following the discussions the A.G.C. submitted its detailed recommendations in writing.

A special committee met in July with representatives of the Corps to discuss provisions of the Engineering Manual for Airfield Flexible Pavement Design and the Guide Specifications for Flexible Pavement, Bituminous Binder and Surface Courses. Subsequently the committee made a formal presentation of recommendations.

The Task Unit for Municipal Specifications is working closely with the American Public Works Association in revision of the A.P.W.A. *Sidewalk and Curb Specifications and Subgrade and Foundation Specifications*. The A.P.W.A.-A.G.C. joint cooperative committee is working to develop a uniform form of contract for municipal engineering construction projects, using as a model the suggested form of contract for engineering construction projects developed by the American Society of Civil Engineers and the A.G.C.

Joint Committee. The A.S.C.E.-A.G.C. joint cooperative committee, at its latest meeting in May, reviewed the progress which has been made toward overcoming the shortage of engineers and increasing salaries for engineers in government service. The committee reaffirmed its opposition to the practice of governmental agencies requiring contractors to submit alternate designs. A number of legislative items were discussed on which A.S.C.E. and A.G.C. views were similar.

Public Relations

The principal purpose of the public relations activities of the association is to bring about a wider appreciation of the work of general contractors and the association, and to secure greater recognition by the various groups of people with whom the industry comes in contact directly or indirectly that this work is carried out with skill, integrity and responsibility.

The effectiveness of all the association's work depends, first, upon the merit of A.G.C. proposals and, second, upon the understanding which other people have of them and upon the confidence they have in the A.G.C.

For these reasons the national association for the past five years has carried out and gradually expanded a coordinated program aimed at informing various segments of the public of the work of A.G.C. and members.

An increasing number of chapters and branches have initiated or expanded their public relations activities.

The Constructor. Publication of *THE CONSTRUCTOR*

is the largest single activity of the public relations staff. The magazine gives editorial support to the association's entire program and provides information for association members. Chapters have found that by taking out subscriptions for architects, engineers, public officials and others influential in the award of construction contracts in their communities, these other groups are informed about and favorably impressed by A.G.C. actions.

The July issue of the magazine, which carried the roster of A.G.C. membership as usual, was the largest in its 31-year history.

Other Publications. Since 1949 the *National Newsletter* has been issued at least once a month to bring members information with timeliness, terseness, accuracy and reliability.

Care is given to the design and printing of all the various documents which are necessary to carry out the association's business so that they most effectively carry out their purpose.

Advertising. A small program of paid advertising has been continued as an economical means of bringing a brief message to large numbers of people. The advertisements have been directed principally toward individuals having influence in the award of construction contracts, and the messages have carried forward some portion of the A.G.C. program.

The latest expansion of the national association's activities has been to undertake a study in cooperation with representatives of the A.G.C. Secretaries' and Managers' Council on means by which the national association can be of greatest assistance to chapters in their programs.

Study is being given to the methods of teaching used in high schools, and to the most effective publications which the association can prepare to aid teachers in providing students with information about the construction industry and general contractors. If the publications are prepared and distributed properly, information about the industry can be taught in schools throughout the country.

An increasing number of A.G.C. chapters were shown in a recent survey to be cooperating with architectural and engineering schools in their areas through endowments, lectures, scholarships for students, or other means. Study is being given to appropriate material to be furnished to these colleges and universities.

Association Affairs

Membership in the association has continued its steady growth since 1939. On September 1 there were 6,415 memberships in the national association. There are 122 chapters and branches in every state and Alaska.

Officers of the association have been in almost daily contact with the national office to give personal attention to the association's program. Since the convention the Executive Committee has met in May and in July to thoroughly review the association's actions and policies.

During the year positive action has been taken on all important matters brought to the association's attention by the membership and on all major industry developments affecting general contractors.

In June the first annual conference was held in Chicago at which chapter managers and members of the national staff held a series of shop talks on how the chapters and the national association could carry out all phases of the A.G.C. program more effectively locally and nationally. The two-day meeting was attended by 59 men from 43 chapters and the national staff, who unanimously agreed that the discussions were invaluable in bringing about a clearer understanding of the association's program and leading to more effective action.

As the national staff has increased in size it has been possible for more of its members to attend meetings of chapters or regional groups. So far this year direct contacts have been made with more than 70 chapters by representatives of the national association.

During the year the officers and Executive Committee approved a reorganization of the national staff which permits it to handle the continuously expanding volume of work most effectively. James D. Marshall was named Executive Director. Charles S. Embrey was named Assistant Executive Director. Greater responsibility was placed on managers of association divisions or departments. The change permits the Managing Director to devote more time to association policies and programs, which are executed under the direction of Mr. Marshall and Mr. Embrey.

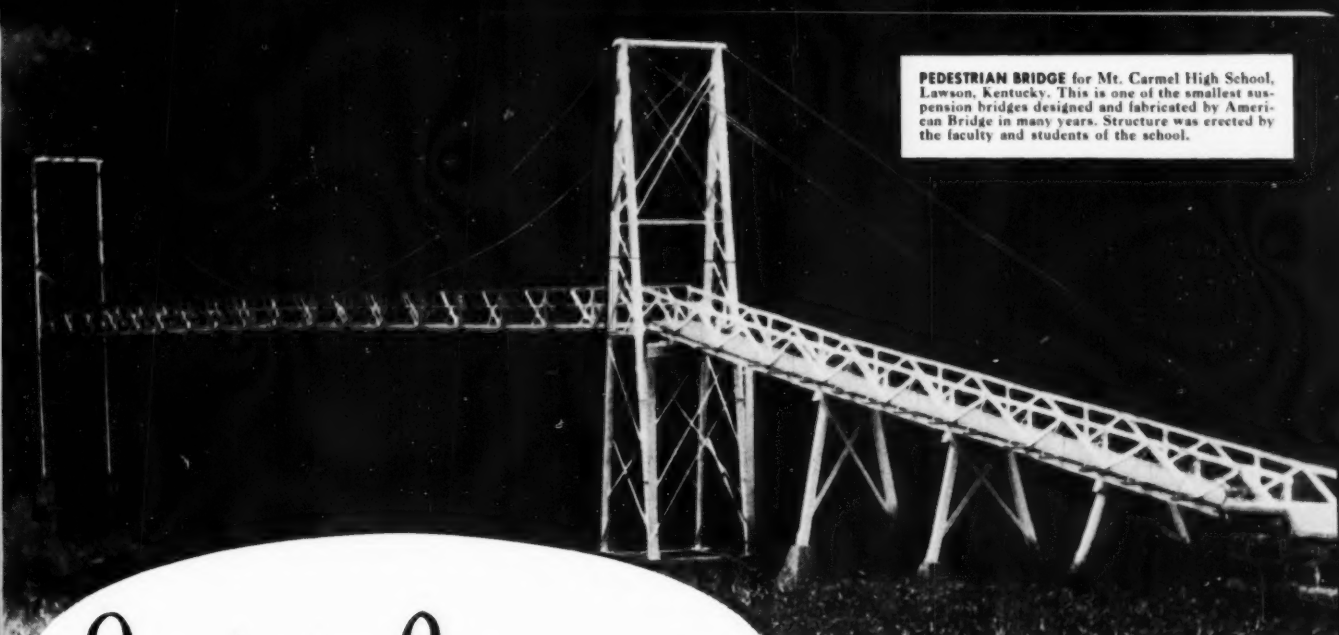
Continued improvement is being made by the chapters and the national association in carrying out the A.G.C. program.

Conclusion

This report gives an account of the principal actions of the association during a period when business generally and the government have been undergoing a period of readjustment.

In carrying out the association's work the officers, members of the Executive Committee, and the staff have adhered to the basic principle that A.G.C. actions be of maximum benefit to all members, to the industry generally, and to the public.

The association's program has been conducted in accord with policies recommended by the annual convention, the Governing and Advisory Boards, the Executive Committee or the officers.



PEDESTRIAN BRIDGE for Mt. Carmel High School, Lawson, Kentucky. This is one of the smallest suspension bridges designed and fabricated by American Bridge in many years. Structure was erected by the faculty and students of the school.

Study in Extremes

by


AMERICAN BRIDGE

MOST people associate American Bridge with *big* bridges. And that's understandable, for they're the ones that make the headlines.

But, American Bridge also builds small bridges. In fact, we have recently designed and fabricated a part of an exceptionally small suspension bridge. We show it here. And to give you a better idea of the wide variety of our work, we also show a picture of the famous San Francisco-Oakland Bay bridge, the world's greatest bridge.

What a study in extremes! The little pedestrian bridge is only 402' 7½" long and 6' wide, while the main structure for the tremendous San Francisco-Oakland Bay bridge is 22,720' long. It has two main suspension spans, each 2,310' long. The main span of the tiny foot bridge measures but 244' 7½"! The total weight of the smaller structure is approximately 25 tons; steel for the larger job weighs 201,000 tons!

Contrasting these two bridges is just another way of saying that no



SAN FRANCISCO-OAKLAND BAY BRIDGE fabricated and erected by American Bridge is the world's greatest. It is 8½ miles between terminals of which 4½ miles is steel superstructure over San Francisco Bay.

bridge is too large or too small for American Bridge. We have the fabricating facilities, erecting equipment and technically trained personnel to handle any type of steel construction with exacting precision, thoroughness and speed . . . any time, anywhere. For detailed information regarding your requirements, call our nearest office.

Interesting Movie Now Available for FREE Showing

The new sound and color motion picture—*Building for the Nations*—a candid, factual photographic record of the highlights of the fabrication and erection of the United Nations Secretariat Building in New York is now available for free showing in churches, schools, clubs and industries. For bookings, write Pittsburgh office.

AMERICAN BRIDGE DIVISION, UNITED STATES STEEL CORPORATION • GENERAL OFFICES: 525 WILLIAM PENN PLACE, PITTSBURGH, PA.

Contracting Offices in: AMBRIDGE • ATLANTA • BALTIMORE • BIRMINGHAM • BOSTON • CHICAGO • CINCINNATI • CLEVELAND • DALLAS • DENVER • DETROIT • ELMIRA
GARY • MEMPHIS • MINNEAPOLIS • NEW YORK • PHILADELPHIA • PITTSBURGH • PORTLAND, ORE. • ROANOKE • ST. LOUIS • SAN FRANCISCO • TRENTON
UNITED STATES STEEL EXPORT COMPANY, NEW YORK

AMERICAN BRIDGE



UNITED STATES STEEL

Secretaries at Chicago Meeting View Current Industry Picture

- National A.G.C. Officers Address Council Session
- Praise June Conference as "Extremely Productive"

» THE SECRETARIES' and Managers' Council of The Associated General Contractors of America, in session prior to the mid-year board meeting in Chicago heard reports from its members and the national staff on recent activities of the A.G.C. and discussed current problems of chapter management.

President C. P. Street, Charlotte, N. C. and Vice President John MacLeod, Paramount, Calif., stressed the importance of cooperation between chapters and the national office on A.G.C. matters. Following these speakers, Managing Director H. E. Foreman welcomed the chapter executives to the meeting and Executive Director J. D. Marshall outlined the board meeting program.

Praises June Meeting

Eugene H. Brown, executive secretary of the A.G.C. of West Virginia, reported to the council on the Joint Executives Conference in Chicago this past June. He described the conference as an "extremely productive and

worth while meeting," and added that "it is the hope of all concerned that every chapter and branch executive will be privileged to attend such joint meetings in the future."

(Ed. Note: The June conference, first special meeting of its kind at which the chapter managers and the national staff studied mutual problems, was authorized at the Miami convention this past March by the Council. There was unanimous agreement afterward by those attending the conference that the discussions had led to a better understanding of A.G.C. programs and that such meetings should be continued in the future.)

R. A. Smith, vice chairman of the Legislative Committee, reported to the council on S. 848, the Senate bill, which if passed would require general contractors on federal work to include in their proposals the names and bids of all subcontractors. The A.G.C. opposes this legislation on the grounds that it would tend to stifle competition and unduly increase the administrative responsibilities and cost of fed-

eral projects without benefit to the government.

Reviews Davis-Bacon Act

William E. Dunn, manager of A.G.C. Labor Relations, addressed the council on recent labor developments, especially those concerning the Davis-Bacon Act which sets wage rates on government projects in accordance with the prevailing wages in the area. He told the secretaries that disputes which are constantly arising over the administration of the act may have to be settled by legislation.

George M. Schmeltzer, executive secretary of the Pennsylvania Builders Chapter, reported activities of the council's liaison committee with the Accident Prevention Committee. Orville W. Crowley, executive secretary of the A.G.C. of Iowa, made a similar report of his liaison committee with the Public Relations Committee.

Duplicate Membership

A committee of five general contractors and five council members, with Past President Glen Maxon as chairman, was appointed by President Street to study the problem of duplicate membership. The committee met for several hours and decided to consider it further before making recommendations to the Executive Committee.

Division Meetings

Following the council meeting, William C. Bowden, secretary of the Master Builders Association of Allegheny County (Pa.), and A. H. Harding, manager of the Portland (Ore.) Chapter directed afternoon meetings of the Building Division and the Highway and Heavy Division chapter officials respectively.

The Highway and Heavy Division meeting discussed such matters as toll roads, public roads administration, the work of A.G.C. joint cooperative committees, rental rates, force account work and the shortage of engineers.



Officers of the Secretaries' and Managers' Council shown conferring at a session of the council: left to right, William C. Bowden, vice chairman of the building chapters; Robert Patten, chairman; A. H. Harding, vice chairman of the highway and heavy chapters; and Curtis Bell, secretary.

The Texas Highway Branch of the A.G.C. was scheduled early this month to take part in a panel discussion of prestressed concrete design at the annual highway "short course" at Texas A. & M. College under the joint sponsorship of the college and the Texas state highway department. A.G.C. members were expected to attend the session scheduled for Sept. 30-Oct. 1.

A.G.C. Branch and Chapter Meetings

» A MONTHLY, cumulative list of annual meetings scheduled by chapters and branches of The Associated General Contractors of America, as reported to THE CONSTRUCTOR:

- Oct. 13. Connecticut State Chapter. New Haven. Union League Club.
 Oct. 22-24. Pennsylvania Builders Chapter. Harrisburg. Penn-Harris Hotel.
 Nov. 9-10. Carolinas Branch. Hot Springs, Virginia. The Homestead.
 Nov. 19. Chicago Builders Chapter. Chicago. Builders Club.
 Dec. 1. Colorado Building Chapter. Denver. Albany Hotel.
 Dec. 1. Dallas Chapter. Dallas. Dallas Athletic Club.
 Dec. 1. Eastern Washington Builders Chapter. Spokane. Desert Hotel.
 Dec. 2. Waco Chapter. Waco. Elite Cafe on "The Circle."
 Dec. 2-3. Wisconsin Chapter. Milwaukee. Plankinton Hotel.
 Dec. 4-5. Northern California Chapter. San Francisco. Palace Hotel.
 Dec. 5. New Mexico Building Branch. Albuquerque. Hilton Hotel.
 Dec. 6-7. Municipal Contractors Association. Dallas. Adolphus Hotel.
 Dec. 7. Florida West Coast Chapter. Tampa. (Not Selected)
 Dec. 7. Ohio Highway Chapter. Columbus. Neil House.
 Dec. 7-8. A.G.C. of Illinois. Springfield. Hotel Leland.
 Dec. 7-8. A.G.C. of North Dakota. Fargo. Gardner Hotel.
 Dec. 8. Austin Chapter. Austin. A.G.C. office.
 Dec. 8. Seattle Chapter. Seattle. Their offices.
 Dec. 8-9. Master Builders of Iowa. Des Moines. Savery Hotel.
 Dec. 9-10-11. A.G.C. of South Dakota, Inc. Huron. Marvin Hughitt Hotel.
 Dec. 11. South Texas Chapter. Corpus Christi. Shoop's Party Room.
 Dec. 14. Spokane Chapter. Spokane. Hotel Spokane.
 Dec. 15. Associated Building Contractors of Mississippi, Inc. Jackson. The Rotisserie.
 Dec. 15. West Texas Chapter. (Not Selected).
 Dec. 15-16. New York State Chapter, Inc. New York. Waldorf Astoria.
 Dec. 16. A.G.C. of Massachusetts. Boston. Hotel Kenmore.
 Dec. 17. Memphis Chapter. Memphis. A.G.C. Building.
 Jan. 5. Toledo Chapter. Toledo. Commander Perry Hotel.
 Jan. 6. Northwest Florida Chapter. Pensacola. A.G.C. offices, Theisen Building.
 Jan. 6-7. Kansas Contractors Association. Kansas City. Muehlebach Hotel.
 Jan. 7. Fort Worth Chapter. Fort Worth. Worth Hotel.
 Jan. 7. Southern Nevada Builders Chapter. Las Vegas. Chapter office.
 Jan. 8-9. Intermountain Branch. Salt Lake City. Hotel Utah.
 Jan. 8-9. Montana Contractors Association. Billings. Northern Hotel.
 Jan. 8-9. West Virginia Chapter. Charleston. Daniel Boone Hotel.
 Jan. 11. Portland Chapter (Highway and Heavy). Portland. Multnomah Hotel.
 Jan. 12. General Building Contractors Association. Philadelphia. (Not Selected).
 Jan. 12. Master Builders Association. District of Columbia. Mayflower Hotel.
 Jan. 13-14. A.G.C. of Iowa. Des Moines. Hotel Savery.
 Jan. 13-14. A.G.C. of Missouri. St. Louis. Statler Hotel.
 Jan. 14. Baltimore Builders Chapter. Baltimore. Park Plaza Hotel.
 Jan. 14. San Diego Chapter. San Diego. El Cortez Hotel.
 Jan. 15. Alabama Branch. Birmingham. Tutwiler Hotel.
 Jan. 15. Mountain Pacific Chapter. Seattle. Benjamin Franklin Hotel.
 Jan. 16. Oklahoma Chapter (Builders Division). Oklahoma City. Skirvin Hotel.
 Jan. 20. Louisville Chapter. Louisville. Chapter Building.
 Jan. 21. Contractors Association of Philadelphia and Eastern Pennsylvania. Philadelphia. Bellevue-Stratford Hotel.
 Jan. 20-21. Nebraska Building Chapter. (Not Selected).
 Jan. 22-23. Colorado Contractors Association. Denver. Shirley Savoy Hotel.
 Jan. 27. A.G.C. of Rhode Island. (Not Selected).
 Jan. 28-29. Virginia Branch. Hot Springs. The Homestead.
 Jan. 28-29-30. A.G.C. of Minnesota. St. Paul. St. Paul Hotel.
 Jan. 29. Central California Chapter. San Francisco. Mark Hopkins Hotel.

To Back your BID
on big jobs

CONTRACT
BONDS

 **Fire Association**
SINCE 1817
Symbols of Security  **Reliance**
INSURANCE COMPANIES OF PHILADELPHIA

FINANCIAL STRENGTH

The financial strength of Fire Association and Reliance, and their excellent reinsurance connections, make it possible to authorize contract bonds on big jobs without delay.

Remember, also, that use of our preferred rates may mean the difference between your bid and competing ones on your next job. Our lines of credit for contractors enable our agents to give you *fastest service*, with prompt execution of Bid and Performance Bonds.

Ask your agent or broker to establish your line of credit with us now, or write for name of our nearest agent.

Head Offices: 401 Walnut St., Philadelphia 6, Penna. Branches in Atlanta, Chicago, Dallas, New York, San Francisco, Toronto. Claims and Settling Agents throughout the world.

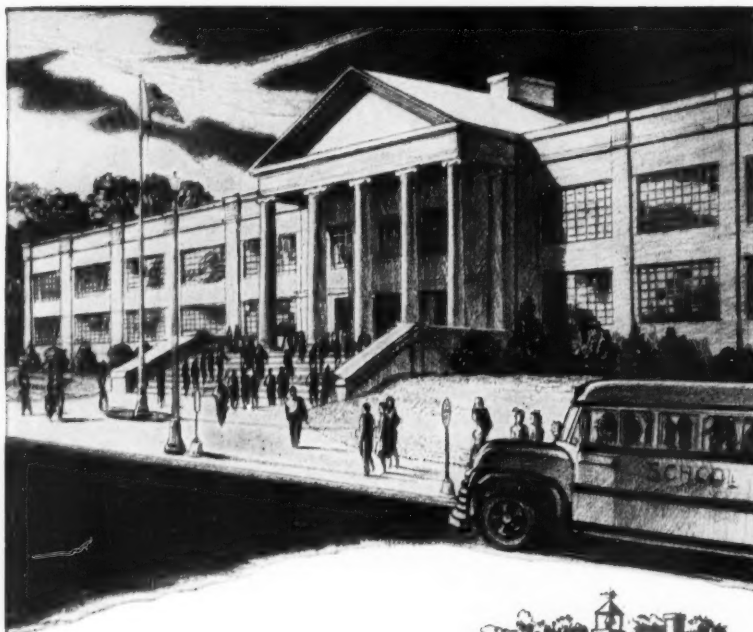
PROPERTY AND CASUALTY INSURANCE — SURETY BONDS



136 Years of



Reliable Insurance Protection



Gone are the days of the one-room schoolhouse. Today — thanks to the great construction industry — our young people are being educated in the most modern schools in the world.

The Aetna Casualty and Surety Company is particularly proud that it has bonded many of the contractors who have transformed the dreams of educators into reality. Aetna bonding service is a complete service. Wherever you are, an Aetna representative is nearby. Whatever the size of your job, Aetna has the financial strength and facilities to provide suretyship. Aetna's trained staff has the experience and knowledge to give prompt and expert assistance to its clients even on the most complex and difficult bonding problems.

At all times and on all projects, Aetna offers you prompt, efficient, helpful service. That is why so many contractors bond with Aetna — always.

No job too big — no job too small

ÆTNA CASUALTY AND SURETY COMPANY

AFFILIATED COMPANIES: ÆTNA LIFE INSURANCE COMPANY
 AUTOMOBILE INSURANCE COMPANY • STANDARD FIRE INSURANCE COMPANY
 HARTFORD 15  CONNECTICUT



CHAPTERS • BRANCHES

- Jan. 29. Mississippi Valley Flood Control Branch. Memphis. Hotel Peabody.
- Feb. 9. Tacoma Chapter. Tacoma. Winthrop Hotel.
- Feb. 11. Contractors Association of Western Pennsylvania. Pittsburgh. Hotel William Penn.
- Feb. 12-13. Kentucky Highway Chapter. Louisville. Kentucky Hotel.
- March 10. Houston Chapter. Houston. College Inn.
- April 6-7. Michigan Road Builders Association. Detroit. Hotel Statler.
- April 15. Buffalo Chapter. Buffalo. Buffalo Club.

Tentative Dates

- Jan. 15. A.G.C. of Milwaukee. Milwaukee. Schroeder Hotel.
- Jan. 18. Nebraska Chapter. (Not Selected).
- Jan. 20. Detroit Chapter. Detroit. Detroit Athletic Club.
- Jan. 20. Southern California. Los Angeles. (Not Selected).
- Jan. Alaska Chapter. Seattle. New Washington Hotel.
- Jan. South Florida Chapter. (Not Selected).
- Jan. or Feb. A.G.C. of Wyoming. Cheyenne. Frontier Hotel.
- Feb. Michigan Chapter. Lansing. Olds Hotel.
- March. Baton Rouge Chapter. Baton Rouge. (Not Selected).
- March. Cincinnati Chapter. Cincinnati. Cincinnati Club.
- March. Metropolitan Builders Association. New York. University Club.

Wisconsin Chapter of the A.G.C. published an article in its *Building Construction News* warning contractors that if they bid too low during these days of "murderous" competition they face a good chance of losing money or going broke. Chief reasons for this situation are the large number of new contractors starting out with inadequate financing, limited staffs, and not enough experience in estimating, it said.

Ohio Highway Chapter of the A.G.C. late in August moved from its temporary offices back into its permanent offices at 40 West Gay Street in Columbus. The chapter had been forced to evacuate the Gay Street office following a fire last December, and was using office space elsewhere.

STANDARD FORMS

COVERING IMPORTANT CONTRACTING PROCEDURE



Prepared by The Associated General Contractors of America and Cooperating Bodies

Order No.	MANUALS	Per Copy	Per Dozen	Per 100
1.	A.G.C. Manual (Contains documents listed below: Nos. 3-30, inclusive, and Nos. 34, 35, 36, 36a, 37, 38).	\$5.00	\$50.00	—
2.	Accident Prevention Manual (Revised and enlarged 1952)	3.00	30.00	\$210.00
CONTRACTS				
3.	Suggested Form of Contract, Engineering Construction Projects, prepared by A.S.C.E. and A.G.C., 1953 edition	.25	2.75	20.00
4.	Standard Building Contract of the American Institute of Architects—Revised 6th Edition	.50		47.50
5.	Subcontract form—American Institute of Architects—Revised 6th Edition	.10		9.50
6.	Standard Form of Acceptance of Subcontractor's Proposal	.10		9.50
7.	Standard Government Contract	.01		
8.	A.G.C. Cost Plus a Fee Contract	.10	.50	2.50
9.	A.I.A. Cost Plus a Fee Agreement between Contractor and Owner—Revised 6th Edition	.10		
11.	Equipment Rental Agreement	.10	.50	3.00
12.	A.G.C. Proposal Form	.10	.50	3.00
ESTIMATING AND ACCOUNTING				
13.	A.I.A. Accounting Form #701 "Change Order"	.20	1.80	12.00
14.	A.I.A. Accounting Form #702 "Request for Partial Payment"	.20	1.80	12.00
15.	A.I.A. Accounting Form #703 "Certificate for Payment"	.20	1.80	12.00
16.	Building Estimate Summary	.10	.50	3.00
17.	Job Overhead Summary	.10	.50	3.00
20.	Contractors' Equipment Ownership Expense (Itemized tables of ownership expense elements with instructions for application. Revised 1949)	1.00	10.00	65.00
21.	Equipment Record—Bond paper	.10	.50	3.00
22.	Equipment Record—Cardboard	.10	.50	3.50
INVESTIGATION OF BIDDERS				
24.	Standard Pre-Qualification Questionnaires and Financial Statements for Prospective Bidders—Complete in Cover. Building Construction (For Qualifying Before Bidding)	.20	1.80	12.00
25.	Standard Pre-Qualification Questionnaires			

Order No.	INVESTIGATION OF BIDDERS (Continued)	Per Copy	Per Dozen	Per 100
	and Financial Statements for Prospective Bidders—Complete in Cover. Building Construction (For Qualifying Before Bidding)	.20	\$1.80	\$12.00
26.	Standard Questionnaires and Financial Statement for Bidders—Complete in Cover. Engineering Construction (For Qualifying After Bidding)	.20	1.80	12.00
27.	Standard Questionnaires and Financial Statement for Bidders—Complete in Cover. Building Construction (For Qualifying After Bidding)	.20	1.80	12.00
28.	Financial Statement and Questionnaire for Credit Transactions	.20	1.80	12.00
MISCELLANEOUS				
29.	Insurance Check List	.10	1.00	5.00
30.	The Functions of a General Contractor	.10	.75	6.00
34.	A.G.C. Governing Provisions	.10	.50	3.00
35.	A.G.C. Code of Ethical Conduct	.10	.50	3.00
36.	Concrete Mixer Standards			Single copies—no charge; quantity prices on application.
36a.	Contractors' Pump Standards			
37.	A.I.A. Standard Form of Arbitration Procedure			
38.	Suggested Guide to Bidding Procedure			

FOR A.G.C. MEMBERS ONLY

A.G.C. EMBLEM

List of Styles and Prices on request.

SIGNS AND SEALS

39.	A.G.C. Cardboard Seal (red and black) 24" dia.	.50
40.	A.G.C. Metal Seal (red and black) 10" dia.	.40
41.	A.G.C. Decalcomania Seal (red and black)	
a.	10" dia.	.20
b.	5" dia.	.10
Metal Seals and Decals: 20% discount for orders of more than 50; 40% discount for orders of 200 or more.		

43. A.G.C. SOCIAL SECURITY FORMS

Form SS1: Application for Employment; Form SS2: Employees' History Record; Form SS3: Employees' Employment and Earnings; Form SS4: Payroll. List of prices and styles will be furnished to A.G.C. members on request.

USE THE CONVENIENT COUPON TO PLACE YOUR ORDER

Order No.	Amount	Cost	11.	12.	13.	14.	15.	16.	17.	20.	21.	22.	24.	25.	26.	27.	28.	29.	30.	34.	35.	36.	36a.	37.	38.	39.	40.	41a.	41b.	43. Price List and Samples	Price List and Styles of Emblem	TOTAL COST
1.																																
2.																																
3.																																
4.																																
5.																																
6.																																
7.																																
8.																																
9.																																

Make Checks payable to CONSTRUCTION FOUNDATION, A.G.C., Munsey Building, Washington 4, D. C.

Gentlemen: Enclosed find check for \$_____ for which please send materials as ordered by number herewith.

Name _____ Address _____

City _____ Zone _____ State _____

Oct. 1953

it takes more V.P.M.
to make
**NO-SLUMP CONCRETE
FLOW!**



Vibro Plus handles the stiffest mix with ease—because its patented Rollgear head increases the 3600 RPM shaft speed to 11,000 to 15,000 VPM. Concrete is consolidated more rapidly, more effectively. Equipment lasts longer. Maintenance costs are less. Write for data bulletins and nearest distributor.

TYPE MRSB is gasoline driven, powered by $2\frac{1}{2}$ or $4\frac{1}{2}$ HP Wisconsin or Briggs Stratton air-cooled engine. 360° swivel base. Foolproof snap coupling for 20 or 30 ft. flexible shaft. No V-belt, clutch or gears, Grease fitting permits lubrication in 15 seconds while running. Head needs no lubrication ever. Interchangeable for electric or pneumatic power. $1\frac{3}{4}$ "— $2\frac{3}{16}$ "— $2\frac{3}{16}$ "— 4 " diameter heads. Grinding attachments available.

OUR ENGINEERING DEPT. will recommend, design and build special equipment for any special purpose.

*Reg. U. S. Pat. Off.

VIBRO-PLUS
PRODUCTS, INC.

54-11 QUEENS BLVD., WOODSIDE, 77, N. Y.
WORLD PIONEERS IN APPLIED VIBRATION

NEW EQUIPMENT • MATERIALS

Crawler-Mounted Gradall—Warner & Swasey Co., 5701 Carnegie Ave., Cleveland 3. Crawler-mounted hydraulic-drive unit is designed for use in areas inaccessible to pneumatic-tired equipment. Entire unit is driven by hydraulic pressure. Crawler has 2 speeds, $\frac{1}{2}$ and 1 m.p.h. Controls for boom are also used through diversion valve for forward and reverse motion of undercarriage. Crawler sections are 10' long and 8' wide with 16" treads. Ground clearance under axles is $13\frac{3}{4}$ ", under bevel gear housing, $11\frac{1}{2}$ ".



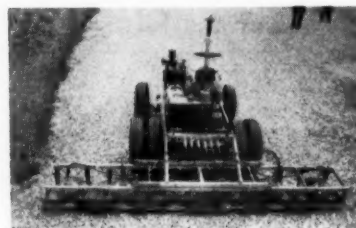
Crawler-mounted Gradall

Extension Booms—Warner & Swasey offer 12' extension boom which, affixed to regular telescoping 24' boom of Gradall, extends working reach to 36'. Used only with 8' blade, it is designed for grading and sloping operations. New 4' boom extension is intended for use with digging buckets up to 24". With it, digging depth is 14', dumping height 17' and reach 28'.

Concrete Mixer—Willard Concrete Machinery Sales Co., 11700 Wright Rd., Lynwood, Calif. New $4\frac{1}{2}$ to $5\frac{1}{2}$ cu. yd. hydro-mixer features drum drive by reversible hydraulic motor operated by power take-off from truck transmission. It can be mounted on most 10-wheel trucks with 147" average wheelbase. Drum is turned by chain and sprocket at 8 to 12 r.p.m. for charging or discharging and 3 to 5 r.p.m. for mixing in transit. Control is by valve which changes direction of fluid in hydraulic motor. Check valve prevents drum roll-back while shifting gears. Folding chute is made of $1\frac{1}{8}$ " steel and extends 4' from swivel center. Two chute extensions, $2\frac{1}{2}$ ' and 5' long, are mounted on fender. Rear-mounted tank carries 67 gal. of water and 24 gal. of oil.

Compactor—Jackson Vibrators, Inc., Ludington, Mich. Multiple compactor for macadam base and granular sub-base construction consists of individual Jackson vibratory compactors attached to workhead which is mounted

on maneuverable carriage-tractor having 6 low-pressure pneumatic tires which permit short turning radius without displacing rock or fines. It has working speeds from 0' to 60' per minute and reverse travel speed up to $5\frac{1}{2}$ m.p.h. Standard width of machine is 13' 3". Separate compactor units may be removed on job to meet conditions requiring narrower widths. Handle, furnished with machine, can be attached to one unit to provide manually operated compactor for areas inaccessible to multiple compactor. Compactor workhead is removable, leaving mobile gas-electric power plant, rated $7\frac{1}{2}$ k.v.a., producing 110-130 volts in both 3-phase and single-phase AC.



Jackson multiple compactor

Mixer—Construction Machinery Co., Waterloo, Iowa. Enlarged and improved "Hoe-Boy" mixer has $3\frac{1}{2}$ to $4\frac{1}{2}$ cu. ft. capacity. Features are leak-proof grease seals, anti-friction hoe shaft bearings and charging height of 34". It is offered with 2.4 h.p. Model 8R6 Briggs & Stratton engine for $3\frac{1}{2}$ cu. ft. batch, or 3 h.p. Model 9R6 for $4\frac{1}{2}$ cu. ft. It is available in gas- or electric-powered models and is 29" wide.



Construction Machinery Co.'s "Hoe-Boy" mixer

THEY SAVE METAL AND MONEY ON TUNNELING JOBS

Hoist Tower—*The Patent Scaffolding Co., 38-21 12th St., Long Island City 1, N. Y.* Lightweight "Trouble Saver" sectional steel hoist tower, designed for maximum load of 4,000 lbs., employs frame-type construction and quick-acting locks. Maximum height is 130'. Height of each frame section is 6'6" with outside dimensions of 6'10½". Platforms are 5'9" x 7'5¾". Tower has one-piece base unit. Top channels slip over frame legs without requiring clamps or bolts. Self-locking joints between frames are secured by wing nuts. Portal frames provide openings in tower at any required level.



Patent Scaffolding sectional steel hoist tower

Mix Selector—*C. S. Johnson Co., Champaign, Ill.* Concrete mix selector is push-button control panel which enables operator to produce 120 different size and type batches of aggregate and cement. Repeater mechanism provides for uninterrupted automatic re-batching of any one selection predetermined number of times. Mix selection mechanism is electrically controlled and is installed under Johnson multiple-compartment aggregate and cement bin. Mix number indicating wheel and hand wheel on control cabinet position selector wheels, one for each material, setting cut-off weight for them. Micro-switches are used as cut-off devices to assure accurate weighing. Hand wheel has positive lock which prevents accidental change of selection during batching. Basic features of older 24-selection model are included in new unit.

The unique design of Armco Liner Plates can save you money on tunneling jobs. You'll find that work tends to speed up while labor and material costs stay low.

By adopting a deeply corrugated design that was continuous through the joint, Armco engineers were able to provide a Liner Plate that was light weight yet retained ample strength. This means you buy less metal, and the plates are easier to handle.

One or two men can readily carry, hold, and bolt a section in place. Small crews do the job quickly without previous experience. No special equipment is needed.

Armco Liner Plate is available in a wide range of sizes and gages in both round and elliptical shapes. Write for complete information. Armco Drainage & Metal Products, Inc., 4623 Curtis Street, Middletown, Ohio. Subsidiary of Armco Steel Corporation.

ARMCO LINER PLATES



CONTRACT BONDS

-BID-
-PERFORMANCE-
-PAYMENT-

By
**The Fidelity and
Casualty Company**
of New York

Writing Surety and Fidelity Bonds since 1876. Nationwide facilities and prompt service through 35 conveniently located branch offices, and through agents in practically every community.



Composed of the following
companies

★THE CONTINENTAL
INSURANCE COMPANY

★FIDELITY-PHENIX
FIRE INSURANCE COMPANY

★NIAGARA
FIRE INSURANCE COMPANY

★AMERICAN EAGLE
FIRE INSURANCE COMPANY

★THE FIDELITY & CASUALTY
COMPANY OF NEW YORK

NEW EQUIPMENT • MATERIALS

Crane Undercarriage—Unit Crane & Shovel Corp., 6307 W. Burnham St., Milwaukee 14. Heavy-duty undercarriage for Model 1520 self-propelled mobile crane is designed to provide maximum stability in handling of extremely heavy loads. All-welded undercarriage has double beam arrangement of walking beam principle to provide maximum support for wheel spindles. Each wheel carries its proportionate load without transfer of weight from one axle to another.



Unit 1520 mobile crane and its new undercarriage

Clutches—Unit Crane offers "Alumetallic" clutches as optional equipment on 1020 and 1020A shovels or draglines. Designed to prevent swing clutches from developing high degree of heat from excessive slippage, they are constructed of high-tensile aluminum which dissipates heat more rapidly. Front, center, back and lining plates are all-aluminum alloy and are faced with bi-metallic linings which are matched, making lining-to-lining frictional contact.



All-welded trenchhoe boom with "Goose-neck" or offset design is now standard attachment for Unit's 1020 ¾-yd. machine

Scrapers—LeTourneau-Westinghouse Co., Peoria, Ill. New line of open-top, tractor-drawn, rubber-tired "Carryall" scrapers range in capacity from 10.5 to 28.5 cu. yd. They are available in 4 sizes: O-14 model, for use with tractors of 70 h.p. or more, has struck capacity of 8.1 cu. yd. and heaped of 10.5 cu. yd. O-19, for use with tractors of 75 or more h.p., has struck capacity of 12.2 cu. yd. and heaped of 16 cu. yd. O-23, for use with tractors of 80 or more h.p., has struck capacity of 14.4 cu. yd. and heaped of 19 cu. yd. O-35, for use with tractors of 100 or more h.p., has struck capacity of 22.5 cu. yd. and heaped of 28.5 cu. yd. Scrapers are of all-welded construction. Overhead cables have been eliminated. Machines are operated by double drum power control unit whose 2 cables work through swinging sheaves which are self-aligning.

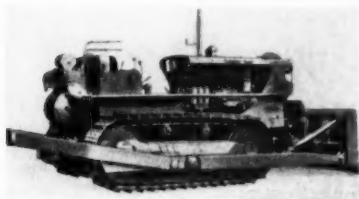


LeTourneau-Westinghouse O-19 open-top "Carryall" scraper

Dry Wall Finishing System—Texture Plaster Sales, Inc., 203 N. Wabash Ave., Chicago 1. "TP Line" consists of silicon joint cement, rubber-based, ready-mixed filler; silicon rubber texture, ready-mixed rubber-base colored paint offered in 8 colors; silicon rubber flat, ready-mixed rubberized silicon flat finish paint, in 12 colors; silicon stipple texture, ready-mixed elastic type base texture paint for interior surfaces which may be tinted any color by addition of rubber or casein base paint; silicon admix, sand additive which can be added to any interior flat or rubber emulsion paint to produce sand texture finishes; reinforcing tape, sulphate stock tape with closely knit long fibers fortified with resin emulsion wet strength agent, available in 2 types, perforated or pin-pointed.

Engine—Hercules Motors Corp., Canton 2, Ohio. Turbo-supercharged version of 6-cylinder diesel Model DFxE is designated DFxE-TS. It has 5⅝" bore x 6" stroke and 895 cu. in. piston displacement. It develops 846 lbs. ft. torque @ 1,800 r.p.m. and 318 h.p. @ 2,000 r.p.m. Fan-to-fly-wheel length is 61⅜".

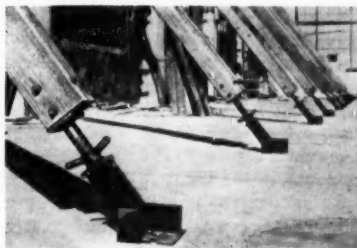
Pusher Tractor—Caterpillar Tractor Co., Peoria 8, Ill. D8 tractor, adapted and equipped specifically for pusher loading work, is modified version of D8, consisting of 150 drawbar h.p. tractor, No. 8S bulldozer and No. 25 cable control. It has D13000 engine modified to produce 150 drawbar h.p. at 1,200 r.p.m. Weight has been increased to 50,025 lbs. Special heavy-weight crankcase guard and track roller guards are standard equipment. Bulldozer and cable controls are designed for in-line pushing action and clean up of cut. It has new transmission for most suitable pushing speed and oil-type clutches. Feature is tandem pusher frame attachment. Power can be transferred from one tractor to another through track roller frame to eliminate destructive stresses imposed on lead tractor's final drive.



Caterpillar D8 pusher tractor

Tractor Clutch—Caterpillar has made oil-type flywheel clutch standard equipment on D7 track-type tractor. In this type of clutch all working parts operate in oil to reduce friction.

Slab Brace—Superior Concrete Accessories, Inc., 4110 Wrightwood Ave., Chicago 39. Adjustable slab brace for positioning and adjusting of precast concrete panels has pivoting action and is used with 2 x 4's or 2 x 6's of standard lengths. Brace is available with fittings for use with pipe instead of lumber. Bulletin TU-2 describing brace is available from manufacturer.



Superior slab brace

6 WAYS TO STEP UP RESULTS and PROFITS!



MACADAM CONSTRUCTION

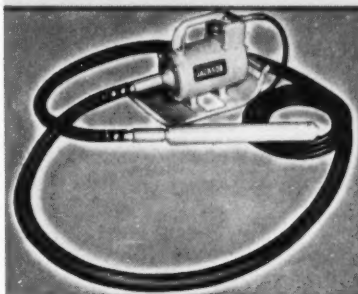
In one pass the Jackson Multiple Compactor will compact 12" of rock to support smooth rollers. In 4 passes compaction to final density may be obtained. With 2 passes all voids from top to bottom can be filled with fines. In gravel sub-bases 7" thick, one pass suffices to produce densities exceeding 100% Standard Proctor. Working speeds from 0 to 60 ft. per minute. 5 1/2 MPH travel speed.



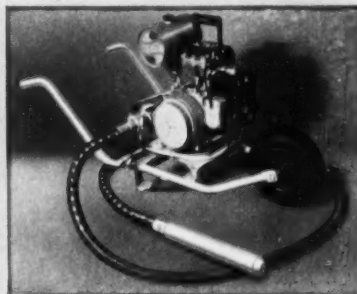
SOIL COMPACTION. The powerful, new, self-propelling Jackson Compactor, with 12" to 26" interchangeable bases, achieves specified density of granular soils in 8" to 10" depths at 2400 sq. ft. per hour. Perfect for bridge and pipeline fills, concrete floor sub-bases, etc.



BLACKTOP WIDENING & PATCHING. The same machine, operated from power plant on auto-trailer with pickup for Compactor, is most efficient means of blacktop pavement widening and patching, paving walks, drives, etc. Compacts 2400 sq. ft. per hour, close to maximum density.



GENERAL CONSTRUCTION. (left); 6 H.P. engine driven, flexible shaft vibrator. Excellent for both thin and thick sections. (Right); 2 1/2 H.P. electric vibrator for light socket operation. Handy as a pocket in a shirt, powerful enough to handle all general construction concrete vibration with shafts up to 28'.



DUAL CURRENT PORTABLE POWER for operating all Jackson machines and lights. 1.5 to 7.5 KVA, providing both single and 3-phase 60 Cy., 120 V, AC (120/240 V in larger models). Permanent magnet generators require no adjustment or maintenance.

FOR SALE OR RENT AT YOUR
JACKSON DISTRIBUTOR

JACKSON

VIBRATORS, INC.

ELECTRIC TAMPER
& EQUIPMENT CO.
LUDINGTON, MICHIGAN



Steel Door Frame—*Steelcraft Manufacturing Co., Rosslyn, Ohio.* Knocked-down steel door frame is shipped from factory in 4 pieces—2 jambs, head and spreader bar. It is assembled with simple tab connection and 4 sheet metal screws. Spreader bar is used to keep frame in alignment. Frames are manufactured in all standard sizes, bonderized and painted with baked-on grey primer.

Hoist—*The Heil Co., 3050 W. Montana St., Milwaukee 1.* Model 2426 twin-cylinder hydraulic hoist is designed for 8' to 17' long platform bodies and 8' to 10' dump bodies. It has 50° dumping angle and low mounting height with space from top of truck chassis to bottom of body 9' 15/16". Pay-load capacity ranges from 3 1/4 tons with platform body length of 17' to 6 1/4 tons with body

length of 9'. When mounted with dump body, capacity is rated from 5 1/2 to 4 1/4 tons, using 8' to 10' body lengths.



Heil Model 2426 hoist

The NAME That Tells Its STORY



✓
Home Office in Kansas City, Missouri, The Heart of America, is CENTRALLY LOCATED.

✓
Bonding service includes Contract, Court, Public Official, License, Forgery, Fidelity.

✓
Insurance coverages include Fire, Inland Marine, Personal Property Floater, Accident, Compensation, Auto (multiple cover), Liability, Burglary, Plate Glass.

✓
Central Surety is a Capital Stock Corporation, writing business through licensed agents and brokers only.

A Multiple Line Company



It's Wise to Centralize

CENTRAL SURETY AND INSURANCE CORPORATION

R. E. McGINNIS, President

HOME OFFICE KANSAS CITY, MISSOURI

Roller—*The Buffalo-Springfield Roller Co., Springfield, Ohio.* Model KX-25D 13- to 20-ton 3-axle tandem roller features walking beam compaction control. When walking beam design is used in semi-locked position, it applies extra compactive effort to high spots only. Both guide rolls are suspended from single rotating beam. When beam is semi-locked, end guide roll can pivot above but not below its normal position. When it encounters high spot, walking beam rotates and allows roll to pass over hump, exerting only normal pressure. As center guide roll rises on hump, semi-locked walking beam causes entire guide end of roller to rise with center roll, lifting end guide roll off surface and transferring its weight to center guide roll. Walking beam can be used unlocked for rolling vertical curves and warped surfaces. KX-25D has 4-speed transmission, transverse engine mounting, bevel gear final drive, good operator visibility, synchronized hydraulic steering, heavy-duty brakes.

Rock Drill—*Eugene Engineering Co., 1485 W. 1st St., Eugene, Ore.* "Ecco" rock drill is complete unit, consisting of compressor, drill and feed, air lines, motive power. It travels and drills with its own power. It is tractor-mounted. Feed is 20'6". Flexible boom is designed to drill in any direction or angle. Drill is operated from movable control panel allowing operator to stay away from face. Literature describing machine is available from manufacturer.

NEW LITERATURE

Scaffolding—Waco Manufacturing Co., 3565 Wooddale Ave., Minneapolis 16. Leaflet lists applications of Waco scaffolding equipment for masonry contractors. It illustrates and lists components of various scaffolding "packages," shows types of mason's jacks and allied equipment.

Tractors, Scrapers—Caterpillar Tractor Co., Peoria 8, Ill. Innovations on diesel D8 track-type tractor are presented in broadside (Form 30875). Drawings and cut-aways and detailed specification sheet are included. . . . DW20 tractors pulling W20 wagons and DW10 tractors with W10 wagons are shown in booklet *Cut Yardage Cost* (Form 30752). . . . DW21 is pictured on earth-moving jobs across country in bulletin (Form 30744). . . . Application of scrapers to earthmoving and bulk material handling is subject of booklet, *A Good Business Deal* (Form 30772). Tractor-scraper combinations are shown in sanitary landfill operations, repairing levees, relocating highways, dredging coal and leveling plant sites.

Engines—Two booklets show applications of Caterpillar diesel engines. *More Power at Less Cost* (Form 30743) illustrates applications of D397, D386, D375, D364, D337 and D326, including industrial engines, marine engines and diesel electric sets. *The Power Parade* (Form 30757) presents uses of engines along with data concerning research, engineering and manufacture.

Cranes for Tilt-Up Construction—Thew Shovel Co., Lorain, Ohio. Application of Lorain cranes to tilt-up method of precast concrete slab construction is presented in new booklet. Number of "Moto-Cranes" are shown lifting slabs and rolling into position to set them in place. Detailed job data are given.

Truck Crane—On-job views of 6-ton Lorain TL-10 truck crane installations are contained in new Thew booklet. Pictures, job data and information on kinds of new or used trucks used in mounting cranes are included and variety of front-end equipment is shown.

Steel Forms—Heltzel Steel Form and Iron Co., Warren, Ohio. Bulletin L-20 discusses steel forms for building concrete curbs, curb and gutters and sidewalks. Interchangeable face,

GETTING A RIVER OUT OF BED



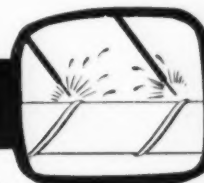
When a river blocked progress on this construction job, the contractors used large diameter Naylor pipe to get the river out of the way. When the job was completed, it was a simple matter to put the river back to bed. Applications like this are typical of the services that this distinctive, extra-strong, lightweight pipe is performing for contractors the world over. Naylor pipe is easy to handle and install—especially with the Naylor Wedge-Lock coupling to speed connections. Sizes from 4 to 30 inches in diameter. Write for Bulletins No. 507 and No. 513.

NAYLOR PIPE

NAYLOR PIPE COMPANY

1280 East 92nd Street, Chicago 19, Illinois

New York Office: 350 Madison Avenue, New York 17, New York





If it's concrete ...
UNIVERSAL
 world's largest manufacturer of
 concrete sewer and culvert pipe
can make it



26 plants for convenient, economical service.

30 years' experience in pipe, cribbing, precast manholes, river-weights, flat base pipe. Name it, we make it!



UNIVERSAL
CONCRETE PIPE CO.

297 South High Street
 Columbus, Ohio

Publishers of Famous "Pipe Dreams"

NEW LITERATURE

build-up, heavy-duty, dowel, 2-piece rigid radius, flexible radius, specials such as island forms are discussed and pictured.

Materials Research—*American Society for Testing Materials, 1916 Race St., Philadelphia 3.* Review of *A.S.T.M. Research*, as published in Dec. 1952 and Jan. and Feb. 1953 *A.S.T.M. Bulletins* is available in reprint form. It summarizes work of various technical committees of society as of May 1953.

Drainage Structures—*Armco Drainage & Metal Products, Inc., Middletown, Ohio.* *Bury Your Bridges to Make Them Better* is title of leaflet on Armco corrugated metal structures. Their advantages are discussed and pictures show typical installations.

Bituminous Plants—*Barber-Greene Co., 400 N. Highland Ave., Aurora, Ill.* Cold aggregate-feed systems for bituminous plants are presented in Bulletin CF. Engineering recommendations on scope and advantages of many types of systems are given. Featured is Barber-Greene's new series of wheel-mounted 4-bin feeders. Other types of feeding equipment are shown and their capacities specified.

Tractor-Shovel—*The Frank G. Hough Co., 819 7th St., Libertyville, Ill.* Model HR 4-wheel drive "Payloaders" is presented in Bulletin 255. Action views show 1-cu. yd. machine doing earth- and material-handling jobs. Details of machine are described and pictured and detailed specifications of all 7 sizes of "Payloaders" are included.

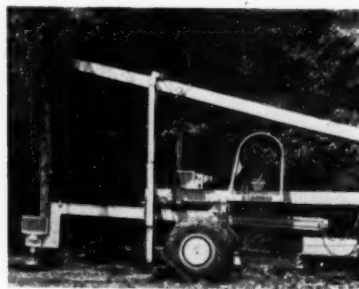
Masonry Cement—*Medusa Portland Cement Co., 1000 Midland Bldg., Cleveland 15.* Gray masonry cement is described in *BrikseT Technical Catalog*. It contains general information and specification data on procedures to follow in construction, including methods for averting efflorescence, provisions for proper flashings and drips, precautions for hot or cold weather construction, recommended types of mortar joints and other information. Tables provide easy method of determining cubic feet of mortar required to lay up brick wall, concrete masonry wall, masonry unit wall of clay or concrete or modular clay tile wall. Illustrations show examples of "BrikseT" mortar in residential, commercial and industrial buildings.

MANUFACTURERS' NOTES

Chester D. Rugen, projects engineer, has been appointed assistant chief engineer of **UNIVERSAL ATLAS CEMENT CO.** Robert B. Jordan, assistant chief construction engineer, Construction Engineering Bureau, U. S. Steel Corp., Fairless Works, has also been appointed assistant chief engineer of the cement company.

P. C. Haldeman has been named works manager of the Foote Construction Equipment Division of **BLAW-KNOX CO.** H. C. Stirling succeeds him as general superintendent of the Rolls Division.

G. E. Burks has been named director of engineering of **CATERPILLAR TRACTOR CO.** He will coordinate the programs of all engineering groups of the various plants and divisions of the company. He is succeeded as chief engineer of the Peoria plant by John E. Jass. Donald E. De Canniere has been appointed supervising engineer over engineering work with bulldozers and cable controls and John A. Junck is supervising engineer over work on hydraulic controls and tool bars . . . Burt Powell has been named Caterpillar advertising manager, succeeding W. K. Cox who has been appointed manager of the sales promotion department.



Self-powered, mobile tree saws clearing land at better than 2 acres per hour were featured in a demonstration of land-clearing equipment held in September on the Texarkana, Texas, Reservoir area. **R. G. Le Tourneau, Inc.**, manufacturer of the equipment being used on the project, staged the demonstration. Clearing operations at the 16,000-acre area are in preparation for the creation of a holding pool on the Sulphur River. The "Tournasaw" has an electrically powered circle saw on a pivoting boom which will selectively cut all trees in a 250 sq. ft. area immediately in front of the "Tournasaw"; and an overhead "pusher boom" which directs the fall of trees in parallel positions.

The name of SIX WHEELS, INC. has been changed to THE MAXI CORP. The trade mark "Maxi" identifies the company's products.

R. E. Bansemer, assistant sales manager of KOEHRING Co., has been named sales manager of its subsidiary, PARSONS Co. M. O. Messenger, sales manager of Parsons, has become assistant sales manager of Koehring.

George D. Gilbert has resigned as secretary of CHAIN BELT Co. and manager of the Baldwin-Duckworth Division and will resign as a director on Oct. 31. William C. Messinger, assistant to the manager of the Construction Machinery Division, has been elected secretary. Edward M. Rhodes has been named manager of Baldwin-Duckworth Division.

A building to house a new 300' air-conditioned high-speed assembly line is now under construction for CUMMINS ENGINE Co. This plant expansion is part of a \$7 million program now under way at Cummins.

Frank C. Edwards has been appointed general manager of HARNISCHFEGGER CORP.'s Diesel Engine Division.

C. H. Rieman has been appointed sales manager of the Mining and Construction Divisions of GARDNER-DENVER Co.

AMERICAN-MARIETTA Co. has acquired controlling interest in UNIVERSAL CONCRETE PIPE Co.

G. P. Scott has resigned as president of EVEREADY BRICKS Co. to become a full partner in the ROBERT G. EVANS Co.

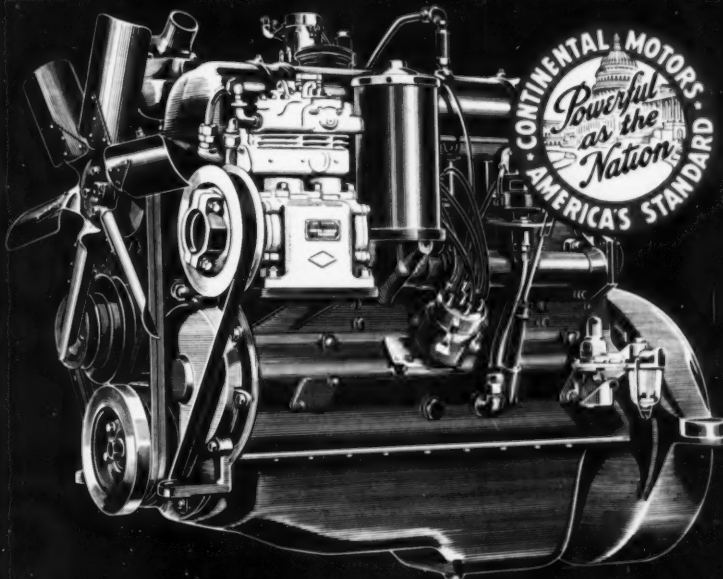
Paul H. Nast has been appointed manager of the rock drill division, DAVEY COMPRESSOR Co.

PETTIBONE MULLIKEN CORP. has acquired the assets of WOOD MANUFACTURING Co. and has organized a new corporation, Pettibone Wood Mfg. Co., a wholly owned subsidiary. The new company will continue operations at the same location and with the same personnel.

CLARK EQUIPMENT Co. celebrated its 50th anniversary in August with a "50th Anniversary Materials-Handling Parade" for directors and employees at the firm's home plant. Included were Michigan power shovels, recently acquired by Clark.

ENGINEERED TO OUT-PERFORM

CONTINENTAL



28 BASIC MODELS FOR TRUCKS AND BUSES

For more than 50 years, Continental has been engineering power plants to do more useful work per pound of engine weight, and building them to run longer with less time out for repairs. Materials flow more steadily and at lower ton-mile cost, when they move to the job in trucks with dependable Red Seal power. And the range of the Red Seal line—28 basic models, Diesel and gasoline—assures exactly the right engine for every commercial transport job.

Continental air-cooled industrial engines, 2, 2½ and 3 h.p., are available in horizontal and vertical shaft types, for lawnmowers, garden tractors, pumps, and other applications. For information, address Air-Cooled Industrial Engine Division, 12800 Kercheval Avenue, Detroit 14, Michigan.



Continental Motors Corporation
MUSKEGON, MICHIGAN

ADVERTISERS' PRODUCTS

Manufacturers' addresses are listed on page 94

Aggregate (Light-Weight)
Great Lakes Carbon Corp.

Airplanes
Aero Design and Engineering Co.

Asphalt Plants (Portable)
Barber-Greene Co.
Iowa Mfg. Co.
White Mfg. Co.

Backfillers
Bucyrus-Erie Co.
Cleveland Trencher Co.
Gradall Division
Parsons Co.
Unit Crane and Shovel Corp.

Batchers
Blaw-Knox Division
Butler Bin Co.
Construction Machinery Co.
Heltzel Steel Form & Iron Co.
C. S. Johnson Co.

Bearings (Anti-Friction, Tapered Roller)
Hyatt Bearings Division
Timken Roller Bearing Co.

Belting
Carlyle Rubber Co.

Bins
Blaw-Knox Division
L. Burmeister Co.
Butler Bin Co.
Heltzel Steel Form & Iron Co.
Iowa Mfg. Co.
C. S. Johnson Co.

Bits (Detachable Drill)
Ingersoll-Rand Co.
Timken Roller Bearing Co.

Blasting Accessories
American Cyanamid Co.

Bridges
American Bridge Division
Armco Drainage & Metal Products

Buckets (Clamshell & Dragline)
Blaw-Knox Division
Bucyrus-Erie Co.
C. S. Johnson Co.
Owen Bucket Co.
Wellman Engineering Co.

Buckets (Concrete)
Blaw-Knox Division
Construction Machinery Co.
Heltzel Steel Form & Iron Co.
Owen Bucket Co.

Buildings (Steel)
Allied Structural Steel Cos.

American Bridge Division
Armco Drainage & Metal Products
Macomber, Inc.
Truscon Steel Division

Bulldozers
Bucyrus-Erie Co.
LeTourneau-Westinghouse Co.

Car Pullers
Clyde Iron Works
Superior-Lidgerwood-Mundy Corp.

Cement (Common and Special)
Lehigh Portland Cement Co.
Lone Star Cement Corp.
Marquette Cement Mfg. Co.
Medusa Portland Cement Co.
Universal Atlas Cement Co.

Cement (White)
Medusa Portland Cement Co.
Trinity White, General Portland Cement Co.
Universal Atlas Cement Co.

Clamps (Hose)
Dixon Valve & Coupling Co.

Compressors
Allis-Chalmers Co.
Ingersoll-Rand Co.
LeRoi Co.

Concrete Mixers, Pavers, Tampers
Chain Belt Co.
Construction Machinery Co.
Foote Construction Equipment Division
Jaeger Machine Co.
Knickerbocker Co.
Koehring Co.
Kwik-Mix Co.
T. L. Smith Co.
Worthington Corp., Construction Equipment Division

Concrete Slab Void Tubes
Sonoco Products Co.

Concrete Vibrators
Concrete Surfacing Machinery Co.
Electric Tamper & Equipment Co.
Ingersoll-Rand Co.
Master Vibrator Co.
Vibro-Plus Products, Inc.
White Mfg. Co.

Conveying Machinery
Barber-Greene Co.
Chain Belt Co.
Iowa Mfg. Co.
Smith Engineering Works

Cranes
Austin-Western Co.
Bucyrus-Erie Co.

Dependable Construction Equipment



Proved Over 100 Years

Manufacturers of Pile Driving Hammers and Pile Extractors
VULCAN IRON WORKS • 329 NORTH BELL AVENUE • CHICAGO 12, ILL.

SLOANE QUANTITY SURVEYS

FOR ALL CLASSES
OF CONSTRUCTION

- Large staff of engineers
- Speed, accuracy, full detail assured
- Reasonable fees, pre-fixed

Approved by A.G.C.
and Governmental Authorities

You can depend on surveys by

H. A. SLOANE ASSOCIATES

Established 1922
415 LEXINGTON AVE., NEW YORK 17

Clark Equipment Co., Construction Machinery Division
Cleveland Trencher Co.
Clyde Iron Works
Koehring Co.
Northwest Engineering Co.
Thew Shovel Co.
Unit Crane and Shovel Corp.

Crushing Machinery
Allis-Chalmers Co.
Austin-Western Co.
Iowa Mfg. Co.
Smith Engineering Works

Culverts
Albert Pipe Supply Co.
Armco Drainage & Metal Products

Cups (Paper Drinking)
United States Envelope Co.

Cutters (Abrasive)
Wodack Electric Tool Corp.

Decking (Roof Steel & Aluminum)
Macomber, Inc.

Derricks
Clyde Iron Works

Doors (Metal, Wood)
Ceco Steel Products Corp.
Kinnear Mfg. Co.
R. C. Mahon Co.
Truscon Steel Division

Dredging Machinery
Bucyrus-Erie Co.
Northwest Engineering Co.

Drills & Drilling Machinery
Bucyrus-Erie Co.
Buda Co.
Ingersoll-Rand Co.
Timken Roller Bearing Co.

Drills (Electric)
Wodack Electric Tool Corp.

Drinking Water Dispensers
United States Envelope Co.

Elevators (Material)
Chain Belt Co.
Iowa Mfg. Co.
Smith Engineering Works

Engines
Allis-Chalmers Tractor Div.
American Hoist & Derrick Co.
Buda Co.
Caterpillar Tractor Co.
Continental Motors Corp.
Cummins Engine Co.
Detroit Diesel Engine Division
Ingersoll-Rand Co.
International Harvester Co.
LeRoi Co.
Wisconsin Motor Corp.

Expansion Joints
Laclede Steel Co.

Explosives
American Cyanamid Co.

Financing
C.I.T. Corp.

Finishing Machines (Bituminous)
Barber-Greene Co.

Finishing Machines (Concrete)
Blaw-Knox Division

Flooring
Truscon Steel Division

Forms (Concrete) and Accessories
Blaw-Knox Division
Economy Forms Corp.
Gateway Engineering Co.
Heltzel Steel Form & Iron Co.
Joseph T. Ryerson & Son, Inc.
Sonoco Products Co.
Symons Clamp & Mfg. Co.
Walton Plywood Co.

Generating Sets (Electric)
Caterpillar Tractor Co.
Master Vibrator Co.

Graders
J. D. Adams Mfg. Co.
Allis-Chalmers Tractor Div.
Austin-Western Co.
Caterpillar Tractor Co.
Euclid Road Machinery Co.
Galion Iron Works & Mfg. Co.
Gradall Division
Koehring Co.

Gravel Plants (Portable)
Iowa Mfg. Co.
Smith Engineering Works

Grinders (Electric)
Wodack Electric Tool Corp.

Hammers (Electric)
Master Vibrator Co.
Wodack Electric Tool Corp.

Hoists
American Hoist & Derrick Co.
Clyde Iron Works
Construction Machinery Co.
Ingersoll-Rand Co.
McKiernan-Terry Corp.
Superior-Lidgerwood-Mundy Corp.

Hose (Air, Water, Steam, Suction)
Carlyle Rubber Co.
United States Rubber Co.

Industrial Financing
C.I.T. Corp.

Insurance (Automobile, Casualty, Compensation, Liability)
Aetna Casualty & Surety Co.
American Casualty Co.
Central Surety & Insurance Corp.
Employers Mutuals of Wausau

Jacks
Buda Co.

CONTRACTOR'S RUBBER PRODUCTS

FOR
IMMEDIATE
DELIVERY

AIR, WATER, SUCTION, FIRE,
STEAM, OIL, PILE DRIVER,
DREDGE SLEEVES, AND ALL
OTHER TYPES OF RUBBER
HOSE

ALSO—CONVEYOR, ELEVATOR,
MUCKER, PORTABLE CONVEYOR
AND OTHER TYPES OF RUBBER
BELTING

CARLYLE RUBBER CO., INC.

62-64 PARK PLACE Diggins 9-3810 NEW YORK 7, N. Y.



Dependable Hammers for Contractors



WODACK "Do-All"®
Combination Electric
Hammer and Drill

For drilling and chipping concrete and masonry, the Wodack "Do-All" is the first choice of thousands of contractors. They try it, like and buy more.

Gives extra service, as a drill as well as a hammer. Change made in less than a minute. Drills $\frac{3}{8}$ " in steel, $\frac{1}{2}$ " in wood. Quick factory service on accessories, parts and repairs. Most repairs can be made by owner.

Accessories: Star drills in 20 diameters $\frac{1}{4}$ " to $1\frac{1}{2}$ " and drilling

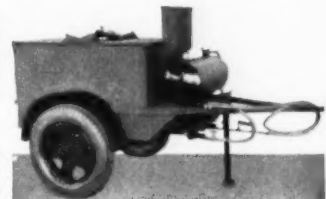
depths to 24". Chisels, points and many other hammer tools. Attachments for grinding, honing and right angle drilling. Drill stand and grinding stand.

Ask for full information in Bulletin 510-C. No obligation—no salesmen. Sold direct to contractors.

Wodack® Electric Tool Corp.
4629 W. Huron St., Chicago 44, Ill.
AUSTIN 7-9866

White Heating Kettles Have Fire-Proof Tops

Cut-back and highly inflammable road repair material can be heated safely in White kettles. FIRE-PROOF top reduces fire hazard.



White asphalt and tar kettles are extensively used. They give long life and satisfaction.

Plain kettles or with hand or engine driven spray pumps for patching pavement. Thermometer, barrel hoist, warming hood extra. All oil burning Semi-elliptic springs, pneumatic tires

65, 110, 165, 220, 300 gallon capacities.

Model F 10 is oil jacketed, to heat elastic joint filler.

Other Products CONCRETE VIBRATORS

Gasoline Engine and
Electric Motor Driven Models

ASPHALT PLANTS

Portable—Stationary

FRONT END LOADERS

for Industrial Tractors

KEROSENE TORCHES

3 to 20 gal. capacities

Write for Circulars and Name of Nearest Dealer

Elkhart 10 **White Mfg. Co.** Indiana

ADVERTISERS' PRODUCTS

Joists (Steel)

Ceco Steel Products Corp.
Laclede Steel Co.
Macomber, Inc.

Kettles, Heating (Asphalt & Tar)

White Mfg. Co.

Lighting Plants

LeROI Co.

Loaders (Portable)

J. D. Adams Mfg. Co.
Barber-Greene Co.

Lubricants

Gulf Oil Corp.
Lubriplate Division

Menders (Hose)

Dixon Valve & Coupling Co.
Ingersoll-Rand Co.

Mixers (Truck)

Blaw-Knox Division
Chain Belt Co.

Mixing Plants

Blaw-Knox Division
L. Burmeister Co.
Butler Bin Co.
Chain Belt Co.
C. S. Johnson Co.

Mortar (Masonry)

Lehigh Portland Cement Co.
Marquette Cement Mfg. Co.

Nipples (Hose)

Dixon Valve & Coupling Co.

Pan Forms (Concrete)

Gateway Erectors, Inc.

Partitions (Steel, Load-Bearing)

Macomber, Inc.

Pile Drivers

American Hoist & Derrick Co.
Austin-Western Co.
Bucyrus-Erie Co.
Ingersoll-Rand Co.
McKiernan-Terry Corp.
Northwest Engineering Co.
Thew Shovel Co.
Vulcan Iron Works

Piling (Steel)

Albert Pipe Supply Co.
Allied Structural Steel Cos.
American Bridge Division
Armco Drainage & Metal Products
Bethlehem Steel Co.

Pipe

Albert Pipe Supply Co.
Armco Drainage & Metal Products
Laclede Steel Co.
Naylor Pipe Co.
Universal Concrete Pipe Co.

Plywood

Walton Plywood Co.

Pumps (Contractors')

Barnes Mfg. Co.
C.H.&E. Mfg. Co.
Carver Pump Co.
Chain Belt Co.
Construction Machinery Co.
Essick Manufacturing Co.
Gorman-Rupp Co.
Griffin Wellpoint Corp.
Ingersoll-Rand Co.
Jaeger Machine Co.
Leyman Mfg. Corp.
Marlow Pumps
Novo Engine Co.
Peerless Pump Division
Rice Pump & Machine Co.
Sterling Machinery Corp.
Worthington Corp., Construction Equipment Division

Pumps (Jetting)

Gorman-Rupp Co.
Griffin Wellpoint Corp.

Quantity Surveyors

H. A. Sloane Associates

Quarry Plants

Austin-Western Co.
Iowa Mfg. Co.
Smith Engineering Works

Railway Equipment & Track Material

Buda Co.
Wisconsin Motor Corp.

Reinforcement Accessories

Economy Forms Corp.
Symons Clamp & Mfg. Co.

Reinforcing Steel and Mesh

American Bridge Division
Bethlehem Steel Co.
Ceco Steel Products Corp.
Connors Steel Division
Laclede Steel Co.
Joseph T. Ryerson & Son, Inc.
Truscon Steel Division

Rollers

Austin-Western Co.
Blaw-Knox Division
Bucyrus-Erie Co.
Euclid Road Machinery Co.
Galion Iron Works & Mfg. Co.

Roof Deck (Steel)

Allied Structural Steel Cos.
Ceco Steel Products Corp.
R. C. Mahon Co.
Truscon Steel Division

Rope (Wire)

American Hoist & Derrick Co.
Joseph T. Ryerson & Son, Inc.

Sash (Metal, Wood)

Hope's Windows, Inc.
Truscon Steel Division

ALWAYS ASK FOR

**STEEL BY
FLINT**

STEEL
ERECTION
FABRICATION
DETAILING

If you need steel, any kind of steel — structural, galvanized, reinforcing bars and mesh or pans — ONE Call to Flint will secure it. DELIVERY can usually be made from our full stocks.

- STRUCTURAL
- PLATE
- WAREHOUSE
- REINFORCING
- GALVANIZED

FLINT STEEL CORPORATION

P. O. BOX 1289

TULSA, OKLAHOMA

SYMONS



FORMS

for

- STRAIGHT WALLS
- BATTERED WALLS
- CURVED WALLS
- SLABS

Ask for Estimate



SYMONS CLAMP & MFG. CO. Dept. J-3
4239 DIVERSEY AVE. • CHICAGO 39, ILLINOIS

Scaffolding (Sectional Steel, Tubular Steel)
Safway Steel Products, Inc.

Scarifiers
J. D. Adams Mfg. Co.
Austin-Western Co.

Scrapers
Austin-Western Co.
Bucyrus-Erie Co.
Caterpillar Tractor Co.
Euclid Road Machinery Co.
Galion Iron Works & Mfg. Co.
LeTourneau-Westinghouse Co.

Screens (Sand, Gravel & Coal)
Iowa Mfg. Co.
Smith Engineering Works

Shores
Symons Clamp & Mfg. Co.

Shovels (Power)
American Hoist & Derrick Co.
Austin-Western Co.
Bucyrus-Erie Co.
Butler Bin Co.
Clark Equipment Co., Construction Machinery Division
Koeberling Co.
Northwest Engineering Co.
Thew Shovel Co.
Unit Crane and Shovel Corp.

Shutters (Fire, Labeled)
Kinnear Mfg. Co.
R. C. Mahon Co.

Slings (Wire Rope)
American Hoist & Derrick Co.

Spreaders (Bituminous Surface)
Galion Iron Works & Mfg. Co.

Stabilizing Equipment
Iowa Mfg. Co.
Seaman Motors, Inc.

Steel (Structural)
Allied Structural Steel Cos.
American Bridge Division
Bethlehem Steel Co.
Flint Steel Corp.
Macomber, Inc.
Joseph T. Ryerson & Son, Inc.
Truscon Steel Division

Surety Bonds
Aetna Casualty & Surety Co.
America Fore Insurance Group
American Casualty Co.
American Surety Co.
Central Surety & Insurance Corp.
Employers Mutuals of Wausau
Fidelity & Deposit Co.
Fire Association of Philadelphia
Insurance Co. of North America
National Surety Corp.

Surveying Instruments
Fennel Instrument Corp.
Warren-Knight Co.

Tires
Goodyear Tire & Rubber Co.
United States Rubber Co.

Tools (Pneumatic, Electric)
Allis-Chalmers Co.
Ingersoll-Rand Co.

Torches (Kerosene)
White Mfg. Co.

Tractors
Allis-Chalmers Tractor Div.
Caterpillar Tractor Co.
International Harvester Co.

Trailers (Dump & Crawler Wheel)
Euclid Road Machinery Co.
LeTourneau-Westinghouse Co.

Trailers (Heavy Equipment)
Rogers Bros. Corp.

Trenchers
Barber-Greene Co.
Clark Equipment Co., Construction Machinery Division
Cleveland Trencher Co.
Gradall Division
Parsons Co.
Unit Crane and Shovel Corp.

Trestles (Adjustable Steel)
Safway Steel Products, Inc.

Trucks (Heavy Rear-Dump)
Euclid Road Machinery Co.

Trucks (Motor)
International Harvester Co.

Trusses (Steel)
Macomber, Inc.

Tunnel Liner Plates
Armco Drainage & Metal Products

Used Equipment
Bianchi, Central, Munroe-Langstroth, Rugo

Valves (Air—Self-Monitoring)
Dixon Valve & Coupling Co.

Wagons (Dump)
Austin-Western Co.
Caterpillar Tractor Co.
Euclid Road Machinery Co.
LeTourneau-Westinghouse Co.

Walls
R. C. Mahon Co.

Washing Plants
Austin-Western Co.
Iowa Mfg. Co.
Smith Engineering Works

Wellpoint Systems
Griffin Wellpoint Corp.

Winches
Clyde Iron Works
Superior-Lidgerwood-Mundy Corp.

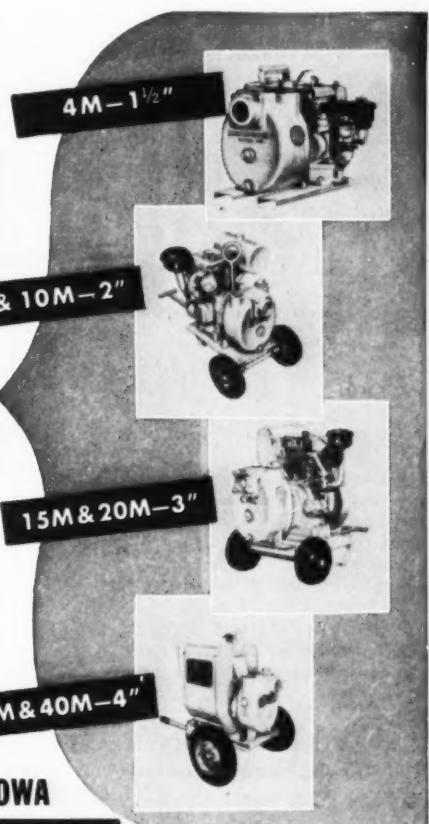
GET FAST DUAL PRIMING—
DEPENDABLE LONG LIFE OPERATION—
and **KING SIZE** in **VALUE!**

 **DUAL PRIMERS**

Completely New Dual Prime Pump Line Featuring

- Faster Dual Volute Priming
- Self Cleaning Case
- Lighter Weight—Easier to Move
- Unpacked Long Life Seal
- Half the Parts—Easier to Service
- Unitized Construction—Trouble Free Operation

CONSTRUCTION MACHINERY COMPANY • WATERLOO, IOWA



MANUFACTURERS LISTED IN GUIDE

J. D. Adams Mfg. Co.
Indianapolis 6, Ind.

Aero Design and Engineering Co.
Tulakes Airport
Oklahoma City, Okla.

Aetna Casualty & Surety Co.
Hartford 15, Conn.

Albert Pipe Supply Co.
Berry & N. 13th St.
Brooklyn 11, N. Y.

Allied Structural Steel Cos.
20 N. Wacker Drive
Chicago 6, Ill.

Allis-Chalmers Co.
Milwaukee 1, Wis.

America Fore Insurance Group
80 Maiden Lane
New York 38, N. Y.

American Bridge Division
United States Steel Co.
525 William Penn Place
Pittsburgh, Pa.

American Casualty Co.
Reading, Pa.

American Cyanamid Co.
30 Rockefeller Plaza
New York 20, N. Y.

American Hoist & Derrick Co.
St. Paul 1, Minn.

American Surety Co.
100 Broadway
New York 5, N. Y.

Armco Drainage & Metal
Products, Inc.
2250 Curtis St.
Middletown, Ohio

Austin-Western Co.
Aurora, Ill.

Barber-Greene Co.
Aurora, Ill.

Barnes Mfg. Co.
603 N. Main St.
Mansfield, Ohio

Bethlehem Steel Co.
Bethlehem, Pa.

Bianchi, Central, Munroe-
Langstroth, Rugo
Downsville, N. Y.

Blaw-Knox Division
2060 Farmers Bank Bldg.
Pittsburgh 22, Pa.

Bucyrus-Erie Co.
South Milwaukee, Wis.

Buda Co.
Harvey, Ill.

L. Burmeister Co.
4527 W. Mitchell St.
Milwaukee 14, Wis.

Butler Bin Co.
Waukesha, Wis.

C. H. & E. Mfg. Co.
3842 N. Palmer St.
Milwaukee 12, Wis.

C.I.T. Corp.
1 Park Ave.
New York 16, N. Y.

Carlyle Rubber Co.
62-64 Park Place
New York 7, N. Y.

Carver Pump Co.
Muscatine, Iowa

Caterpillar Tractor Co.
Peoria 8, Ill.

Ceco Steel Products Corp.
5601 W. 26th St.
Chicago 50, Ill.

Central Surety and Insurance
Corp.
1737 McGee St.
Kansas City 10, Mo.

Chain Belt Co.
4625 W. Greenfield Ave.
Milwaukee 1, Wis.

Clark Equipment Co.
Construction Machinery Division
485 Second St.
Benton Harbor, Mich.

Cleveland Trencher Co.
20100 St. Clair Ave.
Cleveland 17, Ohio

Clyde Iron Works
Duluth 1, Minn.

Concrete Surfacing Machinery Co.
Cincinnati 32, Ohio

Connors Steel Division
H. K. Porter Co.
P. O. Box 2562
Birmingham, Ala.

Construction Machinery Co.
Waterloo, Iowa

Continental Motors Corp.
Muskegon, Mich.

Cummins Engine Co.
Columbus, Ind.

Detroit Diesel Engine Division,
General Motors Corp.
Detroit 28, Mich.

Dixon Valve & Coupling Co.
Columbia & Hancock Sts.
Philadelphia 22, Pa.

Economy Forms Corp.
4301 E. 14th St.
Des Moines 13, Iowa

Electric Tapper & Equipment Co.
Ludington, Mich.

Employers Mutuals of Wausau
Wausau, Wis.

Essick Manufacturing Co.
1950 Santa Fe Ave.
Los Angeles, Calif.

Euclid Road Machinery Co.
Cleveland 17, Ohio

Fennel Instrument Corp. of America
478 Water St.
New York 2, N. Y.

Fidelity & Deposit Co.
Fidelity Bldg.
Baltimore 3, Md.

Fire Association of Philadelphia
401 Walnut St.
Philadelphia 6, Pa.

Flint Steel Corp.
P.O. Box 1289
Tulsa, Okla.

Foots Construction Equipment
Division
Blaw-Knox Co.
1908 State St.
Nunda, N. Y.

Galion Iron Works & Mfg. Co.
Galion, Ohio

Gateway Engineering Co.
3233 W. Grand Ave.
Chicago 51, Ill.

Gateway Erectors, Inc.
3233 W. Grand Ave.
Chicago 51, Ill.

(Continued on page 96)

ASSURE ACCURACY—SAVE TIME—REDUCE COSTS

You can do your field
work better
by using
WARREN-KNIGHT
TRANSITS
and
LEVELS



Special Features that assure you of the greater value per dollar of investment include the following:

- Sturdier Construction—special reinforcing
- Extra fine coated Lenses—flat—brilliant—close focus $4\frac{1}{2}$ feet
- Disappearing Stadia
- Graduations differentiated size and slant
- Right angle peep sight through telescope axle
- Balanced internal focusing telescope
- Non-cramping Leveling head
- Replaceable leveling screws
- Leveling screw threads covered

These Features Assure

Precision
Permanence of Adjustments
Reduced maintenance and
repair costs.
Speed and Convenience in
handling.

10 day TRIAL.

No obligation to purchase

Send for Catalogue C-310

WARREN-KNIGHT CO.

Manufacturers of Warren-Knight Transits and Levels
136 N. 12th Street Philadelphia 7, Pa.



McKIERNAN-TERRY RUGGEDLY-BUILT PILE EXTRACTORS

Provide exceptional pulling power, with the sharp energy of blow needed to vibrate and loosen stubbornly set piling. These double-acting extractors come in two standard models—heavy and extra heavy. Standardized line also contains 11 double-acting hammers and 5 single-acting hammers. Write for free Bulletin.

Also builders of coal and ore bridges, bulk material unloaders, bridge operating mechanisms, hoists and marine equipment, and specially designed machinery.

McKIERNAN-TERRY CORPORATION
MANUFACTURING ENGINEERS, 18 PARK ROW, NEW YORK 38, N. Y.

MK-346A

INDEX OF ADVERTISERS

A.G.C. Forms and Reports	81
Aero Design and Engineering Co.	10
Agency—Tom P. Gordon Co.	
Ætna Casualty and Surety Co.	80
Agency—Wm. B. Remington, Inc.	
Allis-Chalmers Tractor Division	46, 47
Agency—Bert S. Gittins, Advertising	
America Fore Insurance Group	84
Agency—Prince & Co.	
American Bridge Division, U. S. Steel Corp.	77
Agency—Batten, Barton, Durstine & Osborn, Inc.	
American Hoist and Derrick Co.	74
Agency—Ruthrauff & Ryan, Inc.	
Armco Drainage & Metal Products, Inc.	83
Agency—N. W. Ayer & Son, Inc.	
Austin-Western Co.	Cover 2
Agency—Merrill, McEnroe & Associates, Inc.	
Barber-Greene Co.	56
Agency—The Buchen Co.	
Bucyrus-Erie Co.	Cover 4
Agency—Bert S. Gittins, Advertising	
C.I.T. Corp.	4
Agency—Fuller & Smith & Ross, Inc.	
Carlyle Rubber Co.	91
Caterpillar Tractor Co.	36, 37
Agency—N. W. Ayer & Son, Inc.	
Ceco Steel Products Corp.	14
Agency—Charles O. Puffer Co.	
Central Surety and Insurance Corp.	86
Agency—Jerome G. Calvin Advertising Agency	
Clark Equipment Co., Construction Machinery Division	73
Agency—Marsteller, Gebhardt and Reed, Inc.	
Connors Steel Division, H. K. Porter Co.	43
Agency—Robert Luckie & Co.	
Construction Machinery Co.	93
Agency—Weston-Barnett, Inc.	
Continental Motors Corp.	89
Agency—Cummings & Hopkins	
Detroit Diesel Engine Division, General Motors Corp.	28
Agency—Kudner Agency, Inc.	
Euclid Road Machinery Co., The	41
Agency—Richard T. Brandt, Inc.	
Fire Association of Philadelphia	79
Agency—Horton-Noyes Co.	
Flint Steel Corp.	92
Agency—Watts, Payne—Advertising, Inc.	
Gateway Erectors, Inc.	58
Goodyear Tire & Rubber Co., The	1
Agency—Kudner Agency, Inc.	
Griffin Wellpoint Corp.	34
Agency—Posner-Zabin Advertising	
Gulf Oil Corp.	60, 61
Agency—Young & Rubicam, Inc.	
Heltzel Steel Form & Iron Co., The	44
Agency—McClure & Wilder, Inc.	
Hope's Windows, Inc.	35
Agency—The Moss-Chase Co.	

Hyatt Bearings Division, General Motors Corp.	16, 17
Agency—D. P. Brother & Co.	
Jackson Vibrators, Inc.	85
Agency—Stevens, Inc.	
Johnson, C. S., Co.	55
Agency—Andrews Agency, Inc.	
Koehring Co.	54, 55
Agency—Andrews Agency, Inc.	
Laclede Steel Co.	53
Agency—Batz-Hodgson-Neuwoehner Advertising Agency	
LeTourneau-Westinghouse Co.	66, 67
Agency—Andrews Agency, Inc.	
Lone Star Cement Corp.	2
Agency—Cowan & Dengler, Inc.	
Macomber, Inc.	6
Mahon, R. C., Co., The	8
Agency—Anderson, Inc.	
Marquette Cement Manufacturing Co.	Cover 3
Agency—George H. Hartman Co.	
McKiernan-Terry Corp.	94
Agency—Michel-Cather, Inc.	
Medusa Portland Cement Co.	70
Agency—Will, Inc.	
Naylor Pipe Co.	87
Agency—Fred H. Ebersold, Inc.	
Northwest Engineering Co.	12
Agency—Russell T. Gray, Inc.	
Parsons Co.	55
Agency—Andrews Agency, Inc.	
Rogers Brothers Corp.	59
Agency—T. H. Ball and Son	
Sloane, H. A., Associates	90
Agency—Posner-Zabin Advertising	
Sonoco Products Co.	18
Agency—Bennett-Advertising, Inc.	
Superior-Lidgerwood-Mundy Corp.	20
Agency—Albert Frank-Guenther Law, Inc.	
Symons Clamp & Mfg. Co.	92
Agency—Marsteller, Gebhardt and Reed, Inc.	
Thew Shovel Co., The	69
Agency—Hosler Advertising, Inc.	
Truscon Steel Division, Republic Steel Corp.	38
Agency—Meldrum & Fewsmith, Inc.	
Universal Concrete Pipe Co.	88
Agency—Byer & Bowman Advertising Agency	
Vibro-Plus Products, Inc.	82
Agency—William von Zehle and Co.	
Vulcan Iron Works	90
Agency—The Biddle Co.	
Walton Plywood Co.	96
Warren-Knight Co.	94
Wellman Engineering Co., The	27
Agency—The Griswold-Eshleman Co.	
White Mfg. Co.	91
Agency—Juhl Advertising Agency	
Wodack Electric Tool Corp.	91

MANUFACTURERS LISTED IN GUIDE

(Continued from page 94)

Goodyear Tire & Rubber Co.
Akron 16, Ohio

Gorman-Rupp Co.
Mansfield, Ohio

Gradall Division
Warner & Swasey Co.
Cleveland 3, Ohio

Great Lakes Carbon Corp.
612 S. Flower St.
Los Angeles 17, Calif.

Griffin Wellpoint Corp.
881 E. 141st St.
New York 54, N. Y.

Gulf Oil Corp.
Gulf Building
Pittsburgh 30, Pa.

Heltzel Steel Form & Iron Co.
Warren, Ohio

Hope's Windows, Inc.
Jamestown, N. Y.

Hyatt Bearings Division
General Motors Corp.
Harrison, N. J.

Ingersoll-Rand Co.
11 Broadway
New York 4, N. Y.

Insurance Co. of North America
1600 Arch St.
Philadelphia, Pa.

International Harvester Co.
180 N. Michigan Ave.
Chicago 1, Ill.

Iowa Mfg. Co.
Cedar Rapids, Iowa

Jaeger Machine Co.
528 Dublin Ave.
Columbus 16, Ohio

C. S. Johnson Co.
Champaign, Ill.

Kinnear Mfg. Co.
650-680 Fields Ave.
Columbus 16, Ohio

Knickerbocker Co.
Jackson, Mich.

Koehring Co.
3026 W. Concordia Ave.
Milwaukee 16, Wis.

Kwik-Mix Co.
Port Washington, Wis.

Laclede Steel Co.
Arcade Bldg.
St. Louis 1, Mo.

Lehigh Portland Cement Co.
Allentown, Pa.

LeRoi Co.
1706 S. 68th St.
Milwaukee 14, Wis.

LeTourneau-Westinghouse Co.
Peoria 5, Ill.

Layman Mfg. Corp.
Cincinnati 2, Ohio

Lone Star Cement Corp.
100 Park Ave.
New York 17, N. Y.

Lubriplate Division
Fiske Brothers Refining Co.
Newark 5, N. J.

Macomber, Inc.
Canton 1, Ohio

R. C. Mahon Co.
Detroit 34, Wis.

Marlow Pumps
Ridgewood, N. J.

Marquette Cement Mfg. Co.
20 N. Wacker Drive
Chicago 6, Ill.

Master Vibrator Co.
Dayton 1, Ohio

McKiernan-Terry Corp.
18 Park Row
New York 38, N. Y.

Medusa Portland Cement Co.
Midland Bldg.
Cleveland 15, Ohio

National Surety Corp.
4 Albany St.
New York, N. Y.

Naylor Pipe Co.
1280 E. 92d St.
Chicago 19, Ill.

Northwest Engineering Co.
Field Bldg., 135 S. LaSalle St.
Chicago 3, Ill.

Novo Engine Co.
212 Porter St.
Lansing 5, Mich.

Owen Bucket Co.
7750 Breakwater Ave.
Cleveland 2, Ohio

Parsons Co.
Newton, Iowa

Peerless Pump Division
Food Machinery and Chemical Corp.

301 West Ave. 26
Los Angeles 31, Calif.

Rice Pump & Machine Co.
Grafton, Wis.

Rogers Bros. Corp.
223 Orchard St.
Albion, Pa.

Joseph T. Ryerson & Son, Inc.
P. O. Box 8000-A
Chicago 80, Ill.

Safway Steel Products, Inc.
6241 W. State St.
Milwaukee 13, Wis.

Seaman Motors, Inc.
276 N. 25th St.
Milwaukee 3, Wis.

H. A. Sloane Associates
415 Lexington Ave.
New York 17, N. Y.

Smith Engineering Works
510 E. Capitol Drive
Milwaukee 12, Wis.

T. L. Smith Co.
2853 N. 32d St.
Milwaukee 10, Wis.

Sonoco Products Co.
Hartsville, S. C.

Sterling Machinery Corp.
1950 Santa Fe Ave.
Los Angeles 21, Calif.

Superior-Lidgerwood-Mundy Corp.
Superior, Wis.

Symons Clamp & Mfg. Co.
4259 W. Diversey Ave.
Chicago 39, Ill.

Thew Shovel Co.
Lorain, Ohio

Timken Roller Bearing Co.
Canton 6, Ohio

Trinity White, General Portland Cement Co.
111 W. Monroe St.
Chicago 3, Ill.

Truscon Steel Division
1100 Albert St.
Youngstown 1, Ohio

Unit Crane and Shovel Corp.
6307 W. Burnham St.
Milwaukee 14, Wis.

United States Envelope Co.
Springfield 2, Mass.

United States Rubber Co.
Rockefeller Center
New York 20, N. Y.

Universal Atlas Cement Co.
100 Park Ave.
New York 17, N. Y.

Universal Concrete Pipe Co.
297 S. High St.
Columbus, Ohio

Vibro-Plus Products, Inc.
54-11 Queens Blvd.
Woodside, N. Y.

Vulcan Iron Works
329 North Bell Ave.
Chicago 12, Ill.

Walton Plywood Co.
644 E. 38th St.
Indianapolis 5, Ind.

Warren-Knight Co.
136 N. 12th St.
Philadelphia 7, Pa.

Wellman Engineering Co.
7015 Central Ave.
Cleveland 4, Ohio

White Mfg. Co.
Elkhart, Ind.

Wisconsin Motor Corp.
Milwaukee 46, Wis.

Wodack Electric Tool Corp.
4627 W. Huron St.
Chicago 44, Ill.

Worthington Corp.—Constr. Equip. Div.
Plainfield, N. J.

WALTON'S FAMOUS *EverForm* PLASTIC SURFACED CONCRETE FORM PANELS provide maximum re-use value in all types of concrete form work. The sleek, durable, diamond-hard surfaces assure super-smooth concrete, longer "on the job" service and the ultimate in re-uses. The inner core of *EverForm* panels is waterproof (EXT-DFPA) Douglas Fir Plywood. Produced by one of the nation's pioneer Fir Plywood manufacturers.

Samples on request

WALTON PLYWOOD COMPANY, INC.

General Sales Office
644 East 38th Street—Suite #205
Indianapolis 5, Indiana

Mill and General Offices
Everett, Washington

Correct air entrainment in concrete calls for...

**"positive
control
over all
of the
ingredients"**



**Here's how Mr. Alexander Foster—Vice President of the
Warner Company, Philadelphia, Pennsylvania—puts it:**

Warner Company, in Philadelphia, is responsible for producing a tremendous quantity of ready-mixed concrete for all types of construction. Warner Company's plants use at least fourteen different brands of cement in a considerable variety of mixes. The company's management realizes the decided advantage of having positive control over *all* of the ingredients. Recognizing the merits of air-entrained concrete and the prime importance of close control of the entrained air in the amounts required for various types of concrete usage, the management has learned by experience the advantage

of the 'prescription' method of adding the required amount of air-entraining agent *at the mixer.*"

Construction men everywhere are discovering that the "prescription" technique is the *only* way to produce air-entrained concrete that always lives up to its performance promise.

★ ★ ★

If you have any problems or questions on the use and mixing of air-entrained concrete, a Marquette Service Engineer will be glad to help and advise you—contact any Marquette office.

Marquette Cement

MANUFACTURING COMPANY

SALES OFFICES: Chicago • St. Louis • Memphis • Jackson, Miss. • **PLANTS:** Oglesby, Ill.
Des Moines, Ia. • Cape Girardeau, Mo. • Nashville, Tenn. • Cowan, Tenn. • Brandon, Miss.

PORTLAND • HIGH EARLY STRENGTH • AIR ENTRAINING • MASONRY



Big Payloads...

**ANOTHER ADVANTAGE
OF BUCYRUS-ERIE INDIVIDUAL DESIGN**



**BUCYRUS
ERIE**



FOR SMALL-JOB PROFITS investigate Hydrocrane, the high-speed truck-mounted, all-hydraulic crane for jobs too small for larger machines. It can be quickly converted to a dragshovel right in the field.

With Bucyrus-Erie Individual Design you get the smooth coordination of hoist, crowd, and swing that assures big payloads on every pass. The operator, working with easily manipulated, responsive controls, finds it easy to heap the dipper, easy to keep those big loads coming all through the shift.

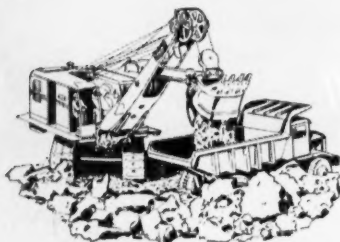
That's because each machine in the Bucyrus-Erie $\frac{3}{8}$ - to 4-cu. yd. line is designed from the ground up to handle its rated capacity most efficiently. There are no oversize or undersize dippers used to make "different" models. With Individual Design, speed, power, strength and weight are all properly proportioned, and the machine works most efficiently as a whole.

See your Bucyrus-Erie Distributor soon. He'll show you the other great advantages of Individual Design—fast work cycles, low maintenance, long machine life, low operating costs.

23E53

BUCYRUS-ERIE COMPANY

SOUTH MILWAUKEE
WISCONSIN



$\frac{3}{8}$ to 4 cu. yd. gasoline, diesel, and single-motor electric Shovels, Draglines, Cranes, Clamshells, Dragshovels — Hydrocranes, Hydrohoes.